

# APPENDIX 1

## MATERIAL COMPOSITION

The product material composition is illustrated in the table below. The material weight is given in grams and in percentage on total product weight.

**Table 1: Material composition**

Material	Weight (g)	Weight-%
Aluminium	6023	76.96
Copper	12.68	0.16
Other Plastics	1190.82	15.22
Paint	186	2.38
PCB Alu	27.9	0.36
PCB Copper	32.08	0.41
PCB Iron	28.05	0.36
PCB Non-ferrous metal	0.01	0
PCB Support	112.4	1.44
PCB Tin	1.94	0.02
PP / PS-High Impact PS / ABS	36	0.46
Stainless Steel	2	0.03
Steel	171.99	2.2
Tin	1.35	0.02

## APPENDIX 2

### USE PHASE (B6) VALUES FOR DIFFERENT COUNTRY MIX

In this EPD the B6 impact has been calculated using the energy mix of EU. The table in this appendix is useful for conversion and comparison of B6 values with other country energy mix. The Global Warming Potential Total (GWP tot) value is illustrated for each country. The value refers to 1 kwh.

Example on how to use the table:

If for example this EPD was done according to EU energy mix and you want to see how the GWP total changes according to a Finland country energy mix, you can take the original value in the results table here highlighted in yellow:

### ENVIRONMENTAL IMPACT DATA, RESULTS PER DECLARED UNIT

*The estimated impact results are only relative statements which do not indicate the end points of the impact categories, exceeding threshold values, safety margins or risks.*

#### CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, EF 3.1

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP – total <sup>1)</sup>	kg CO <sub>2</sub> e	1.08E+01	2.33E-01	5.06E-01	1.15E+01	3.27E+00	1.68E+00	ND	ND	ND	ND	ND	4.06E-02	ND	0.00E+00	2.88E-02	5.13E-01	2.80E-01	-9.88E-01

Divide that value according to the EU value from the following table (EU = 3.30E-01) and then multiplying for the Finland value from the same table (FINLAND = 1.54E-01).

Thus, the calculation of this example would be:

New B6 GWP tot for Finland =  $(4.06E-02 / 3.30E-01) \times 1.54E-01 = 1.89E-02$ .

Country	GWP tot (kg CO2 eq. per kwh)		
AFRICA	7.30E-01	GERMANY	3.90E-01
APAC	9.50E-01	INDIA	1.50E+00
AUSTRALIA	8.40E-01	ITALY	3.50E-01
AUSTRIA	2.30E-01	LATAM	3.90E-01
BELGIUM	2.00E-01	NAM	4.50E-01
CHINA	1.02E+00	NETHERLANDS	3.90E-01
DENMARK	1.60E-01	NORWAY	4.50E-02
EU	3.30E-01	ROW	7.30E-01
FINLAND	1.54E-01	SPAIN	2.10E-01
FRANCE	8.70E-02	SWEDEN	3.70E-02
		UK	2.60E-01

Source Ecoinvent 3.10.1

## APPENDIX 3 - EPD HUB ALIGNED

This section represents the scaling method for the **B6 module**, following the PEP EcoPassport PSR for luminaries (PSR-0014-ed2.0-EN-2023 07 13). The GWP results were scaled from a reference variant of a product family, based on various light management scenarios and power inputs of the luminaires within the same product family.

To calculate the Scaled Impact (*SI*), we have followed the below methods:

1. Calculate the power scaling factor (PSF), which is the ratio of the power input of the variant in questions  $P_{in}$  and the power input of the base variant  $P_{base}$ .

$$PSF = \frac{P_{in}}{P_{base}}$$

2. Calculate the Total Scaling factor by multiplying the PSF by the control scaling factor (CSF), where the CSF is determined according the relevant control factor scenario (e.g. if the luminaire has a presence detection system). The presented controls factors values in Table A1 are based on BS EN 15193-1:2017. Please refer to this publication or contact Signify directly for more information.

$$TSF = PSF * CSF$$

**Table 1: Light management function (PEP EcoPassport aligned)**

Scenario	Abbrev.	CSF
No control	NC	1
Daylight dependency factor	DD	0.75
Presence sensing	PS	0.75
Daylight dependency and presence sensing	DD+PS	0.55

3. Lastly, the GWP of the base variant is then scaled by the TSF.

$$\text{Scaled Impact} = \text{GWP}_{\text{case}} * \text{TSF}$$

The following list of product configurations is not exhaustive. Please use the formula defined in point 1 above to calculate the exact power scaling factor (PSF) for any specific configuration.

**Table 2: GWP per scaling factor (EPD Hub aligned)**

	12NC or Product Family Code	Description	Flux [lm]	Power [W]	Efficacy [lm/W]	PSF	Total Scaling Factor (TSF)				Scaled Impacts (GWP100 B6 - kg CO2eq.)			
							NC	DD	PS	DD+PS	NC	DD	PS	DD+PS
1	BDP270	BDP270LED8-4S740DM50	624	5.6	111.4	0.196	0.196	0.147	0.147	0.108	184.2	138.2	138.2	101.3
2	BDP270	BDP270LED10-4S740DM50	780	6.8	114.7	0.239	0.239	0.179	0.179	0.131	223.7	167.8	167.8	123.0
3	BDP270	BDP270LED12-4S740DM50	936	7.7	121.6	0.270	0.270	0.203	0.203	0.149	253.3	190.0	190.0	139.3
4	BDP270	BDP270LED14-4S740DM50	1092	8.9	122.7	0.312	0.312	0.234	0.234	0.172	292.8	219.6	219.6	161.0
5	BDP270	BDP270LED16-4S740DM50	1248	10.0	124.8	0.351	0.351	0.263	0.263	0.193	329.0	246.8	246.8	181.0
6	BDP270	BDP270LED18-4S740DM50	1404	11.2	125.4	0.393	0.393	0.295	0.295	0.216	368.5	276.4	276.4	202.7
7	BDP270	BDP270LED20-4S740DM50	1560	12.4	125.8	0.435	0.435	0.326	0.326	0.239	408.0	306.0	306.0	224.4
8	BDP270	BDP270LED22-4S740DM50	1694	13.6	124.6	0.477	0.477	0.358	0.358	0.262	447.4	335.6	335.6	246.1
9	BDP270	BDP270LED24-4S740DM50	1848	15.0	123.2	0.526	0.526	0.395	0.395	0.289	493.5	370.1	370.1	271.4
10	BDP270	BDP270LED27-4S740DM50	2079	17.0	122.3	0.596	0.596	0.447	0.447	0.328	559.3	419.5	419.5	307.6
11	BDP270	BDP270LED30-4S740DM50	2310	19.0	121.6	0.667	0.667	0.500	0.500	0.367	625.1	468.8	468.8	343.8
12	BDP270	BDP270LED34-4S740DM50	2618	20.0	130.9	0.702	0.702	0.526	0.526	0.386	658.0	493.5	493.5	361.9
13	BDP270	BDP270LED35-4S740DM50	2695	20.5	131.5	0.719	0.719	0.539	0.539	0.396	674.5	505.8	505.8	370.9
14	BDP270	BDP270LED39-4S740DM50	3003	23.0	130.6	0.807	0.807	0.605	0.605	0.444	756.7	567.5	567.5	416.2
15	BDP270	BDP270LED40-4S740DM50	3080	23.5	131.1	0.825	0.825	0.618	0.618	0.454	773.2	579.9	579.9	425.2
16	BDP270	BDP270LED44-4S740DM50	3388	26.0	130.3	0.912	0.912	0.684	0.684	0.502	855.4	641.6	641.6	470.5

17	BDP270	BDP270LED45-4S740DM50	3465	27.0	128.3	0.947	0.947	0.711	0.711	0.521	888.3	666.2	666.2	488.6
18	BDP270	BDP270LED50-4S740DM50	3850	28.5	135.1	1.000	1.000	0.750	0.750	0.550	937.7	703.2	703.2	515.7
19	BDP270	BDP270LED55-4S740DM50	4312	31.5	136.9	1.105	1.105	0.829	0.829	0.608	1036.4	777.3	777.3	570.0
20	BDP270	BDP270LED59-4S740DM50	4620	33.5	137.9	1.175	1.175	0.882	0.882	0.646	1102.2	826.6	826.6	606.2
21	BDP270	BDP270LED64-4S740DM50	4864	37.0	131.5	1.298	1.298	0.974	0.974	0.714	1217.3	913.0	913.0	669.5
22	BDP270	BDP270LED69-4S740DM50	5320	40.0	133.0	1.404	1.404	1.053	1.053	0.772	1316.0	987.0	987.0	723.8
23	BDP270	BDP270LED74-4S740DM50	5624	43.0	130.8	1.509	1.509	1.132	1.132	0.830	1414.7	1061.0	1061.0	778.1
24	BDP270	BDP270LED79-4S740DM50	5928	44.5	133.2	1.561	1.561	1.171	1.171	0.859	1464.1	1098.0	1098.0	805.2
25	BDP270	BDP270LED84-4S740DM50	6384	47.5	134.4	1.667	1.667	1.250	1.250	0.917	1562.8	1172.1	1172.1	859.5
26	BDP270	BDP270LED90-4S740DM50	6840	51.0	134.1	1.789	1.789	1.342	1.342	0.984	1677.9	1258.4	1258.4	922.8
27	BDP270	BDP270LED94-4S740DM50	7144	54.0	132.3	1.895	1.895	1.421	1.421	1.042	1776.6	1332.5	1332.5	977.1
28	BDP270	BDP270LED109-4S740DM50	8250	63.0	131.0	2.211	2.211	1.658	1.658	1.216	2072.7	1554.5	1554.5	1140.0
29	BDP270	BDP270LED120-4S740DM50	9000	71.0	126.8	2.491	2.491	1.868	1.868	1.370	2335.9	1751.9	1751.9	1284.7
30	BDP270	BDP270LED130-4S740DM50	9750	77.0	126.6	2.702	2.702	2.026	2.026	1.486	2533.3	1900.0	1900.0	1393.3
31	BDP270	BDP270LED8-4S730DM50	624	5.9	105.8	0.207	0.207	0.155	0.155	0.114	194.1	145.6	145.6	106.8
32	BDP270	BDP270LED10-4S730DM50	780	7.1	109.9	0.249	0.249	0.187	0.187	0.137	233.6	175.2	175.2	128.5
33	BDP270	BDP270LED12-4S730DM50	936	8.2	114.1	0.288	0.288	0.216	0.216	0.158	269.8	202.3	202.3	148.4
34	BDP270	BDP270LED14-4S730DM50	1092	9.4	116.2	0.330	0.330	0.247	0.247	0.181	309.3	231.9	231.9	170.1
35	BDP270	BDP270LED16-4S730DM50	1248	10.6	117.7	0.372	0.372	0.279	0.279	0.205	348.7	261.6	261.6	191.8
36	BDP270	BDP270LED18-4S730DM50	1404	11.8	119.0	0.414	0.414	0.311	0.311	0.228	388.2	291.2	291.2	213.5
37	BDP270	BDP270LED20-4S730DM50	1540	13.2	116.7	0.463	0.463	0.347	0.347	0.255	434.3	325.7	325.7	238.9
38	BDP270	BDP270LED22-4S730DM50	1694	14.6	116.0	0.512	0.512	0.384	0.384	0.282	480.3	360.3	360.3	264.2
39	BDP270	BDP270LED24-4S730DM50	1848	16.0	115.5	0.561	0.561	0.421	0.421	0.309	526.4	394.8	394.8	289.5
40	BDP270	BDP270LED27-4S730DM50	2079	18.0	115.5	0.632	0.632	0.474	0.474	0.347	592.2	444.2	444.2	325.7
41	BDP270	BDP270LED30-4S730DM50	2310	20.5	112.7	0.719	0.719	0.539	0.539	0.396	674.5	505.8	505.8	370.9
42	BDP270	BDP270LED34-4S730DM50	2618	21.0	124.7	0.737	0.737	0.553	0.553	0.405	690.9	518.2	518.2	380.0
43	BDP270	BDP270LED35-4S730DM50	2695	22.0	122.5	0.772	0.772	0.579	0.579	0.425	723.8	542.9	542.9	398.1
44	BDP270	BDP270LED39-4S730DM50	3003	24.5	122.6	0.860	0.860	0.645	0.645	0.473	806.1	604.5	604.5	443.3

45	BDP270	BDP270LED40-4S730DM50	3080	25.0	123.2	0.877	0.877	0.658	0.658	0.482	822.5	616.9	616.9	452.4
46	BDP270	BDP270LED44-4S730DM50	3388	28.0	121.0	0.982	0.982	0.737	0.737	0.540	921.2	690.9	690.9	506.7
47	BDP270	BDP270LED45-4S730DM50	3465	28.5	121.6	1.000	1.000	0.750	0.750	0.550	937.7	703.2	703.2	515.7
48	BDP270	BDP270LED50-4S730DM50	3850	30.0	128.3	1.053	1.053	0.789	0.789	0.579	987.0	740.3	740.3	542.9
49	BDP270	BDP270LED55-4S730DM50	4312	33.5	128.7	1.175	1.175	0.882	0.882	0.646	1102.2	826.6	826.6	606.2
50	BDP270	BDP270LED59-4S730DM50	4620	36.0	128.3	1.263	1.263	0.947	0.947	0.695	1184.4	888.3	888.3	651.4
51	BDP270	BDP270LED64-4S730DM50	4864	39.0	124.7	1.368	1.368	1.026	1.026	0.753	1283.1	962.3	962.3	705.7
52	BDP270	BDP270LED69-4S730DM50	5320	42.5	125.2	1.491	1.491	1.118	1.118	0.820	1398.3	1048.7	1048.7	769.0
53	BDP270	BDP270LED74-4S730DM50	5624	46.0	122.3	1.614	1.614	1.211	1.211	0.888	1513.4	1135.1	1135.1	832.4
54	BDP270	BDP270LED79-4S730DM50	6080	47.5	128.0	1.667	1.667	1.250	1.250	0.917	1562.8	1172.1	1172.1	859.5
55	BDP270	BDP270LED84-4S730DM50	6384	51.0	125.2	1.789	1.789	1.342	1.342	0.984	1677.9	1258.4	1258.4	922.8
56	BDP270	BDP270LED90-4S730DM50	6840	55.0	124.4	1.930	1.930	1.447	1.447	1.061	1809.5	1357.1	1357.1	995.2
57	BDP270	BDP270LED94-4S730DM50	7144	57.0	125.3	2.000	2.000	1.500	1.500	1.100	1875.3	1406.5	1406.5	1031.4
58	BDP270	BDP270LED109-4S730DM50	8250	68.0	121.3	2.386	2.386	1.789	1.789	1.312	2237.2	1677.9	1677.9	1230.5
59	BDP270	BDP270LED120-4S730DM50	9000	76.0	118.4	2.667	2.667	2.000	2.000	1.467	2500.4	1875.3	1875.3	1375.2
60	BDP270	BDP270LED8-4S727DM50	624	6.5	96.0	0.228	0.228	0.171	0.171	0.125	213.9	160.4	160.4	117.6
61	BDP270	BDP270LED10-4S727DM50	780	7.9	98.7	0.277	0.277	0.208	0.208	0.152	259.9	194.9	194.9	143.0
62	BDP270	BDP270LED12-4S727DM50	936	9.1	102.9	0.319	0.319	0.239	0.239	0.176	299.4	224.5	224.5	164.7
63	BDP270	BDP270LED14-4S727DM50	1092	10.4	105.0	0.365	0.365	0.274	0.274	0.201	342.2	256.6	256.6	188.2
64	BDP270	BDP270LED16-4S727DM50	1248	11.8	105.8	0.414	0.414	0.311	0.311	0.228	388.2	291.2	291.2	213.5
65	BDP270	BDP270LED18-4S727DM50	1386	13.2	105.0	0.463	0.463	0.347	0.347	0.255	434.3	325.7	325.7	238.9
66	BDP270	BDP270LED20-4S727DM50	1540	14.8	104.1	0.519	0.519	0.389	0.389	0.286	486.9	365.2	365.2	267.8
67	BDP270	BDP270LED22-4S727DM50	1694	16.4	103.3	0.575	0.575	0.432	0.432	0.316	539.6	404.7	404.7	296.8
68	BDP270	BDP270LED24-4S727DM50	1848	18.0	102.7	0.632	0.632	0.474	0.474	0.347	592.2	444.2	444.2	325.7
69	BDP270	BDP270LED27-4S727DM50	2079	20.5	101.4	0.719	0.719	0.539	0.539	0.396	674.5	505.8	505.8	370.9
70	BDP270	BDP270LED30-4S727DM50	2310	21.0	110.0	0.737	0.737	0.553	0.553	0.405	690.9	518.2	518.2	380.0
71	BDP270	BDP270LED34-4S727DM50	2618	24.0	109.1	0.842	0.842	0.632	0.632	0.463	789.6	592.2	592.2	434.3
72	BDP270	BDP270LED35-4S727DM50	2695	24.5	110.0	0.860	0.860	0.645	0.645	0.473	806.1	604.5	604.5	443.3

73	BDP270	BDP270LED39-4S727DM50	3003	27.5	109.2	0.965	0.965	0.724	0.724	0.531	904.8	678.6	678.6	497.6
74	BDP270	BDP270LED40-4S727DM50	3080	28.5	108.1	1.000	1.000	0.750	0.750	0.550	937.7	703.2	703.2	515.7
75	BDP270	BDP270LED44-4S727DM50	3344	31.5	106.2	1.105	1.105	0.829	0.829	0.608	1036.4	777.3	777.3	570.0
76	BDP270	BDP270LED45-4S727DM50	3420	32.0	106.9	1.123	1.123	0.842	0.842	0.618	1052.8	789.6	789.6	579.0
77	BDP270	BDP270LED50-4S727DM50	3850	34.0	113.2	1.193	1.193	0.895	0.895	0.656	1118.6	839.0	839.0	615.2
78	BDP270	BDP270LED55-4S727DM50	4256	37.5	113.5	1.316	1.316	0.987	0.987	0.724	1233.8	925.3	925.3	678.6
79	BDP270	BDP270LED59-4S727DM50	4560	40.5	112.6	1.421	1.421	1.066	1.066	0.782	1332.5	999.3	999.3	732.8
80	BDP270	BDP270LED64-4S727DM50	4864	44.5	109.3	1.561	1.561	1.171	1.171	0.859	1464.1	1098.0	1098.0	805.2
81	BDP270	BDP270LED69-4S727DM50	5250	48.0	109.4	1.684	1.684	1.263	1.263	0.926	1579.2	1184.4	1184.4	868.6
82	BDP270	BDP270LED74-4S727DM50	5550	52.0	106.7	1.825	1.825	1.368	1.368	1.004	1710.8	1283.1	1283.1	940.9
83	BDP270	BDP270LED79-4S727DM50	6080	54.0	112.6	1.895	1.895	1.421	1.421	1.042	1776.6	1332.5	1332.5	977.1
84	BDP270	BDP270LED84-4S727DM50	6384	57.0	112.0	2.000	2.000	1.500	1.500	1.100	1875.3	1406.5	1406.5	1031.4
85	BDP270	BDP270LED90-4S727DM50	6750	62.0	108.9	2.175	2.175	1.632	1.632	1.196	2039.8	1529.9	1529.9	1121.9
86	BDP270	BDP270LED94-4S727DM50	7050	65.0	108.5	2.281	2.281	1.711	1.711	1.254	2138.5	1603.9	1603.9	1176.2
87	BDP270	BDP270LED109-4S727DM50	8250	77.0	107.1	2.702	2.702	2.026	2.026	1.486	2533.3	1900.0	1900.0	1393.3
88	BDP270	BDP270LED6-4S722DM50	468	5.6	83.6	0.196	0.196	0.147	0.147	0.108	184.2	138.2	138.2	101.3
89	BDP270	BDP270LED8-4S722DM50	624	7.1	87.9	0.249	0.249	0.187	0.187	0.137	233.6	175.2	175.2	128.5
90	BDP270	BDP270LED10-4S722DM50	770	8.8	87.5	0.309	0.309	0.232	0.232	0.170	289.5	217.1	217.1	159.2
91	BDP270	BDP270LED12-4S722DM50	936	10.0	93.6	0.351	0.351	0.263	0.263	0.193	329.0	246.8	246.8	181.0
92	BDP270	BDP270LED14-4S722DM50	1092	11.6	94.1	0.407	0.407	0.305	0.305	0.224	381.6	286.2	286.2	209.9
93	BDP270	BDP270LED16-4S722DM50	1232	13.2	93.3	0.463	0.463	0.347	0.347	0.255	434.3	325.7	325.7	238.9
94	BDP270	BDP270LED18-4S722DM50	1386	14.8	93.6	0.519	0.519	0.389	0.389	0.286	486.9	365.2	365.2	267.8
95	BDP270	BDP270LED20-4S722DM50	1540	16.6	92.8	0.582	0.582	0.437	0.437	0.320	546.1	409.6	409.6	300.4
96	BDP270	BDP270LED22-4S722DM50	1694	18.4	92.1	0.646	0.646	0.484	0.484	0.355	605.4	454.0	454.0	332.9
97	BDP270	BDP270LED24-4S722DM50	1848	20.5	90.1	0.719	0.719	0.539	0.539	0.396	674.5	505.8	505.8	370.9
98	BDP270	BDP270LED27-4S722DM50	2079	21.0	99.0	0.737	0.737	0.553	0.553	0.405	690.9	518.2	518.2	380.0
99	BDP270	BDP270LED30-4S722DM50	2310	23.5	98.3	0.825	0.825	0.618	0.618	0.454	773.2	579.9	579.9	425.2
100	BDP270	BDP270LED34-4S722DM50	2618	27.0	97.0	0.947	0.947	0.711	0.711	0.521	888.3	666.2	666.2	488.6

## PEP ECOPASSPORT ALIGNED

This section represents the scaling method for the **B6 module**, following the PEP EcoPassport PSR for luminaries (PSR-0014-ed2.0-EN-2023 07 13). The GWP results were scaled from a reference variant of a product family, based on various light management functions, the lumen output ( $O_{lum}$ ) and reference service life ( $RSL$ ) of each product within the same product family.

To calculate the Scaled Impact ( $SI_{pep}$ ), we have followed the below methods:

1. Calculate the power scaling factor (PSF), which is the ratio of the power input of the variant in questions  $P_{in}$  and the power input of the base variant  $P_{base}$ .

$$PSF = \frac{P_{in}}{P_{base}}$$

2. Using this scaled GWP, we then can apply the PEP Ecopassport method for calculating the environmental impact of the functional unit for a luminary (1000 lumens over 35000 hours), applied to B6, where the Functional Unit application considers the lumen output ( $O_{lum}$ ) and reference service lifetime ( $RSL$ ) of the product to estimate the final environmental impact. The scaled impact ( $SI_{pep}$ ) is presented in Table A4.

$$GSF = \frac{FU_{pep}}{FU_p} = \frac{1,000}{O_{lum}} * \frac{35,000}{RSL}$$

3. Calculate the GWP scaling factor ( $PGSF$ ), by multiplying the PSF by the GSF.

$$PGSF = PSF * GSF$$

- Calculate the Total Scaling factor by multiplying the PSF by the control scaling factor (CSF), where the CSF is determined according the relevant control factor scenario (e.g. if the luminaire has a presence detection system), as presented in Table A1.

$$TSF = PGSF * CSF$$

**Table 3: Light management functions (PEP EcoPassport aligned)**

Scenario	Abbrev.	CSF
No control	NC	1
Daylight dependency factor	DD	0.75
Presence sensing	PS	0.75
Daylight dependency and presence sensing	DD+PS	0.55

- Lastly, the GWP of the base variant is then scaled by the TSF.

$$Scaled\ GWP = GWP_{case} * TSF$$

**Table 4: Impact per scaling factor (PEP EcoPassport aligned)**

	12NC or Product Family Code	Description	Flux [lm]	Power [W]	Efficacy [lm/W]	PSF	Total Scaling Factor (TSF)				Scaled Impacts (GWP100 B6 - kg CO2eq.)			
							NC	DD	PS	DD+PS	NC	DD	PS	DD+PS
1	BDP270	BDP270LED8-4S740DM50	624	5.6	111.4	0.196	0.110	0.083	0.083	0.061	103.3	77.5	77.5	56.8
2	BDP270	BDP270LED10-4S740DM50	780	6.8	114.7	0.239	0.107	0.080	0.080	0.059	100.4	75.3	75.3	55.2
3	BDP270	BDP270LED12-4S740DM50	936	7.7	121.6	0.270	0.101	0.076	0.076	0.056	94.7	71.0	71.0	52.1
4	BDP270	BDP270LED14-4S740DM50	1092	8.9	122.7	0.312	0.100	0.075	0.075	0.055	93.8	70.4	70.4	51.6
5	BDP270	BDP270LED16-4S740DM50	1248	10.0	124.8	0.351	0.098	0.074	0.074	0.054	92.3	69.2	69.2	50.7
6	BDP270	BDP270LED18-4S740DM50	1404	11.2	125.4	0.393	0.098	0.073	0.073	0.054	91.9	68.9	68.9	50.5
7	BDP270	BDP270LED20-4S740DM50	1560	12.4	125.8	0.435	0.098	0.073	0.073	0.054	91.5	68.6	68.6	50.3
8	BDP270	BDP270LED22-4S740DM50	1694	13.6	124.6	0.477	0.099	0.074	0.074	0.054	92.4	69.3	69.3	50.8
9	BDP270	BDP270LED24-4S740DM50	1848	15.0	123.2	0.526	0.100	0.075	0.075	0.055	93.5	70.1	70.1	51.4
10	BDP270	BDP270LED27-4S740DM50	2079	17.0	122.3	0.596	0.100	0.075	0.075	0.055	94.2	70.6	70.6	51.8
11	BDP270	BDP270LED30-4S740DM50	2310	19.0	121.6	0.667	0.101	0.076	0.076	0.056	94.7	71.0	71.0	52.1
12	BDP270	BDP270LED34-4S740DM50	2618	20.0	130.9	0.702	0.094	0.070	0.070	0.052	88.0	66.0	66.0	48.4
13	BDP270	BDP270LED35-4S740DM50	2695	20.5	131.5	0.719	0.093	0.070	0.070	0.051	87.6	65.7	65.7	48.2
14	BDP270	BDP270LED39-4S740DM50	3003	23.0	130.6	0.807	0.094	0.071	0.071	0.052	88.2	66.1	66.1	48.5
15	BDP270	BDP270LED40-4S740DM50	3080	23.5	131.1	0.825	0.094	0.070	0.070	0.052	87.9	65.9	65.9	48.3
16	BDP270	BDP270LED44-4S740DM50	3388	26.0	130.3	0.912	0.094	0.071	0.071	0.052	88.4	66.3	66.3	48.6
17	BDP270	BDP270LED45-4S740DM50	3465	27.0	128.3	0.947	0.096	0.072	0.072	0.053	89.7	67.3	67.3	49.4
18	BDP270	BDP270LED50-4S740DM50	3850	28.5	135.1	1.000	0.091	0.068	0.068	0.050	85.2	63.9	63.9	46.9
19	BDP270	BDP270LED55-4S740DM50	4312	31.5	136.9	1.105	0.090	0.067	0.067	0.049	84.1	63.1	63.1	46.3
20	BDP270	BDP270LED59-4S740DM50	4620	33.5	137.9	1.175	0.089	0.067	0.067	0.049	83.5	62.6	62.6	45.9
21	BDP270	BDP270LED64-4S740DM50	4864	37.0	131.5	1.298	0.093	0.070	0.070	0.051	87.6	65.7	65.7	48.2
22	BDP270	BDP270LED69-4S740DM50	5320	40.0	133.0	1.404	0.092	0.069	0.069	0.051	86.6	64.9	64.9	47.6
23	BDP270	BDP270LED74-4S740DM50	5624	43.0	130.8	1.509	0.094	0.070	0.070	0.052	88.0	66.0	66.0	48.4
24	BDP270	BDP270LED79-4S740DM50	5928	44.5	133.2	1.561	0.092	0.069	0.069	0.051	86.4	64.8	64.8	47.5

25	BDP270	BDP270LED84-4S740DM50	6384	47.5	134.4	1.667	0.091	0.069	0.069	0.050	85.7	64.3	64.3	47.1
26	BDP270	BDP270LED90-4S740DM50	6840	51.0	134.1	1.789	0.092	0.069	0.069	0.050	85.9	64.4	64.4	47.2
27	BDP270	BDP270LED94-4S740DM50	7144	54.0	132.3	1.895	0.093	0.070	0.070	0.051	87.0	65.3	65.3	47.9
28	BDP270	BDP270LED109-4S740DM50	8250	63.0	131.0	2.211	0.094	0.070	0.070	0.052	87.9	65.9	65.9	48.4
29	BDP270	BDP270LED120-4S740DM50	9000	71.0	126.8	2.491	0.097	0.073	0.073	0.053	90.8	68.1	68.1	50.0
30	BDP270	BDP270LED130-4S740DM50	9750	77.0	126.6	2.702	0.097	0.073	0.073	0.053	90.9	68.2	68.2	50.0
31	BDP270	BDP270LED8-4S730DM50	624	5.9	105.8	0.207	0.116	0.087	0.087	0.064	108.9	81.7	81.7	59.9
32	BDP270	BDP270LED10-4S730DM50	780	7.1	109.9	0.249	0.112	0.084	0.084	0.061	104.8	78.6	78.6	57.6
33	BDP270	BDP270LED12-4S730DM50	936	8.2	114.1	0.288	0.108	0.081	0.081	0.059	100.9	75.7	75.7	55.5
34	BDP270	BDP270LED14-4S730DM50	1092	9.4	116.2	0.330	0.106	0.079	0.079	0.058	99.1	74.3	74.3	54.5
35	BDP270	BDP270LED16-4S730DM50	1248	10.6	117.7	0.372	0.104	0.078	0.078	0.057	97.8	73.4	73.4	53.8
36	BDP270	BDP270LED18-4S730DM50	1404	11.8	119.0	0.414	0.103	0.077	0.077	0.057	96.8	72.6	72.6	53.2
37	BDP270	BDP270LED20-4S730DM50	1540	13.2	116.7	0.463	0.105	0.079	0.079	0.058	98.7	74.0	74.0	54.3
38	BDP270	BDP270LED22-4S730DM50	1694	14.6	116.0	0.512	0.106	0.079	0.079	0.058	99.2	74.4	74.4	54.6
39	BDP270	BDP270LED24-4S730DM50	1848	16.0	115.5	0.561	0.106	0.080	0.080	0.058	99.7	74.8	74.8	54.8
40	BDP270	BDP270LED27-4S730DM50	2079	18.0	115.5	0.632	0.106	0.080	0.080	0.058	99.7	74.8	74.8	54.8
41	BDP270	BDP270LED30-4S730DM50	2310	20.5	112.7	0.719	0.109	0.082	0.082	0.060	102.2	76.6	76.6	56.2
42	BDP270	BDP270LED34-4S730DM50	2618	21.0	124.7	0.737	0.099	0.074	0.074	0.054	92.4	69.3	69.3	50.8
43	BDP270	BDP270LED35-4S730DM50	2695	22.0	122.5	0.772	0.100	0.075	0.075	0.055	94.0	70.5	70.5	51.7
44	BDP270	BDP270LED39-4S730DM50	3003	24.5	122.6	0.860	0.100	0.075	0.075	0.055	93.9	70.5	70.5	51.7
45	BDP270	BDP270LED40-4S730DM50	3080	25.0	123.2	0.877	0.100	0.075	0.075	0.055	93.5	70.1	70.1	51.4
46	BDP270	BDP270LED44-4S730DM50	3388	28.0	121.0	0.982	0.101	0.076	0.076	0.056	95.2	71.4	71.4	52.3
47	BDP270	BDP270LED45-4S730DM50	3465	28.5	121.6	1.000	0.101	0.076	0.076	0.056	94.7	71.0	71.0	52.1
48	BDP270	BDP270LED50-4S730DM50	3850	30.0	128.3	1.053	0.096	0.072	0.072	0.053	89.7	67.3	67.3	49.4
49	BDP270	BDP270LED55-4S730DM50	4312	33.5	128.7	1.175	0.095	0.072	0.072	0.052	89.5	67.1	67.1	49.2
50	BDP270	BDP270LED59-4S730DM50	4620	36.0	128.3	1.263	0.096	0.072	0.072	0.053	89.7	67.3	67.3	49.4
51	BDP270	BDP270LED64-4S730DM50	4864	39.0	124.7	1.368	0.098	0.074	0.074	0.054	92.3	69.2	69.2	50.8
52	BDP270	BDP270LED69-4S730DM50	5320	42.5	125.2	1.491	0.098	0.074	0.074	0.054	92.0	69.0	69.0	50.6

53	BDP270	BDP270LED74-4S730DM50	5624	46.0	122.3	1.614	0.100	0.075	0.075	0.055	94.2	70.6	70.6	51.8
54	BDP270	BDP270LED79-4S730DM50	6080	47.5	128.0	1.667	0.096	0.072	0.072	0.053	90.0	67.5	67.5	49.5
55	BDP270	BDP270LED84-4S730DM50	6384	51.0	125.2	1.789	0.098	0.074	0.074	0.054	92.0	69.0	69.0	50.6
56	BDP270	BDP270LED90-4S730DM50	6840	55.0	124.4	1.930	0.099	0.074	0.074	0.054	92.6	69.4	69.4	50.9
57	BDP270	BDP270LED94-4S730DM50	7144	57.0	125.3	2.000	0.098	0.073	0.073	0.054	91.9	68.9	68.9	50.5
58	BDP270	BDP270LED109-4S730DM50	8250	68.0	121.3	2.386	0.101	0.076	0.076	0.056	94.9	71.2	71.2	52.2
59	BDP270	BDP270LED120-4S730DM50	9000	76.0	118.4	2.667	0.104	0.078	0.078	0.057	97.2	72.9	72.9	53.5
60	BDP270	BDP270LED8-4S727DM50	624	6.5	96.0	0.228	0.128	0.096	0.096	0.070	119.9	90.0	90.0	66.0
61	BDP270	BDP270LED10-4S727DM50	780	7.9	98.7	0.277	0.124	0.093	0.093	0.068	116.6	87.5	87.5	64.1
62	BDP270	BDP270LED12-4S727DM50	936	9.1	102.9	0.319	0.119	0.090	0.090	0.066	112.0	84.0	84.0	61.6
63	BDP270	BDP270LED14-4S727DM50	1092	10.4	105.0	0.365	0.117	0.088	0.088	0.064	109.7	82.3	82.3	60.3
64	BDP270	BDP270LED16-4S727DM50	1248	11.8	105.8	0.414	0.116	0.087	0.087	0.064	108.9	81.7	81.7	59.9
65	BDP270	BDP270LED18-4S727DM50	1386	13.2	105.0	0.463	0.117	0.088	0.088	0.064	109.7	82.3	82.3	60.3
66	BDP270	BDP270LED20-4S727DM50	1540	14.8	104.1	0.519	0.118	0.089	0.089	0.065	110.7	83.0	83.0	60.9
67	BDP270	BDP270LED22-4S727DM50	1694	16.4	103.3	0.575	0.119	0.089	0.089	0.065	111.5	83.6	83.6	61.3
68	BDP270	BDP270LED24-4S727DM50	1848	18.0	102.7	0.632	0.120	0.090	0.090	0.066	112.2	84.1	84.1	61.7
69	BDP270	BDP270LED27-4S727DM50	2079	20.5	101.4	0.719	0.121	0.091	0.091	0.067	113.5	85.2	85.2	62.4
70	BDP270	BDP270LED30-4S727DM50	2310	21.0	110.0	0.737	0.112	0.084	0.084	0.061	104.7	78.5	78.5	57.6
71	BDP270	BDP270LED34-4S727DM50	2618	24.0	109.1	0.842	0.113	0.084	0.084	0.062	105.6	79.2	79.2	58.1
72	BDP270	BDP270LED35-4S727DM50	2695	24.5	110.0	0.860	0.112	0.084	0.084	0.061	104.7	78.5	78.5	57.6
73	BDP270	BDP270LED39-4S727DM50	3003	27.5	109.2	0.965	0.112	0.084	0.084	0.062	105.4	79.1	79.1	58.0
74	BDP270	BDP270LED40-4S727DM50	3080	28.5	108.1	1.000	0.114	0.085	0.085	0.063	106.6	79.9	79.9	58.6
75	BDP270	BDP270LED44-4S727DM50	3344	31.5	106.2	1.105	0.116	0.087	0.087	0.064	108.5	81.4	81.4	59.7
76	BDP270	BDP270LED45-4S727DM50	3420	32.0	106.9	1.123	0.115	0.086	0.086	0.063	107.7	80.8	80.8	59.3
77	BDP270	BDP270LED50-4S727DM50	3850	34.0	113.2	1.193	0.108	0.081	0.081	0.060	101.7	76.3	76.3	55.9
78	BDP270	BDP270LED55-4S727DM50	4256	37.5	113.5	1.316	0.108	0.081	0.081	0.060	101.5	76.1	76.1	55.8
79	BDP270	BDP270LED59-4S727DM50	4560	40.5	112.6	1.421	0.109	0.082	0.082	0.060	102.3	76.7	76.7	56.2
80	BDP270	BDP270LED64-4S727DM50	4864	44.5	109.3	1.561	0.112	0.084	0.084	0.062	105.3	79.0	79.0	57.9

81	BDP270	BDP270LED69-4S727DM50	5250	48.0	109.4	1.684	0.112	0.084	0.084	0.062	105.3	79.0	79.0	57.9
82	BDP270	BDP270LED74-4S727DM50	5550	52.0	106.7	1.825	0.115	0.086	0.086	0.063	107.9	80.9	80.9	59.3
83	BDP270	BDP270LED79-4S727DM50	6080	54.0	112.6	1.895	0.109	0.082	0.082	0.060	102.3	76.7	76.7	56.2
84	BDP270	BDP270LED84-4S727DM50	6384	57.0	112.0	2.000	0.110	0.082	0.082	0.060	102.8	77.1	77.1	56.5
85	BDP270	BDP270LED90-4S727DM50	6750	62.0	108.9	2.175	0.113	0.085	0.085	0.062	105.8	79.3	79.3	58.2
86	BDP270	BDP270LED94-4S727DM50	7050	65.0	108.5	2.281	0.113	0.085	0.085	0.062	106.2	79.6	79.6	58.4
87	BDP270	BDP270LED109-4S727DM50	8250	77.0	107.1	2.702	0.115	0.086	0.086	0.063	107.5	80.6	80.6	59.1
88	BDP270	BDP270LED6-4S722DM50	468	5.6	83.6	0.196	0.147	0.110	0.110	0.081	137.8	103.3	103.3	75.8
89	BDP270	BDP270LED8-4S722DM50	624	7.1	87.9	0.249	0.140	0.105	0.105	0.077	131.0	98.3	98.3	72.1
90	BDP270	BDP270LED10-4S722DM50	770	8.8	87.5	0.309	0.140	0.105	0.105	0.077	131.6	98.7	98.7	72.4
91	BDP270	BDP270LED12-4S722DM50	936	10.0	93.6	0.351	0.131	0.098	0.098	0.072	123.0	92.3	92.3	67.7
92	BDP270	BDP270LED14-4S722DM50	1092	11.6	94.1	0.407	0.130	0.098	0.098	0.072	122.3	91.7	91.7	67.3
93	BDP270	BDP270LED16-4S722DM50	1232	13.2	93.3	0.463	0.132	0.099	0.099	0.072	123.4	92.5	92.5	67.9
94	BDP270	BDP270LED18-4S722DM50	1386	14.8	93.6	0.519	0.131	0.098	0.098	0.072	123.0	92.2	92.2	67.6
95	BDP270	BDP270LED20-4S722DM50	1540	16.6	92.8	0.582	0.132	0.099	0.099	0.073	124.1	93.1	93.1	68.3
96	BDP270	BDP270LED22-4S722DM50	1694	18.4	92.1	0.646	0.133	0.100	0.100	0.073	125.1	93.8	93.8	68.8
97	BDP270	BDP270LED24-4S722DM50	1848	20.5	90.1	0.719	0.136	0.102	0.102	0.075	127.7	95.8	95.8	70.3
98	BDP270	BDP270LED27-4S722DM50	2079	21.0	99.0	0.737	0.124	0.093	0.093	0.068	116.3	87.2	87.2	64.0
99	BDP270	BDP270LED30-4S722DM50	2310	23.5	98.3	0.825	0.125	0.094	0.094	0.069	117.1	87.9	87.9	64.4
100	BDP270	BDP270LED34-4S722DM50	2618	27.0	97.0	0.947	0.127	0.095	0.095	0.070	118.8	89.1	89.1	65.3