

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	4994	67.33
Copper	25.24	0.34
Other Plastics	1888.81	25.47
Paint	128	1.73
PCB Alu	55.8	0.75
PCB Copper	48.61	0.66
PCB Iron	28.13	0.38
PCB Non-ferrous metal	0.28	0
PCB Support	129.7	1.75
PCB Tin	3.07	0.04
Silica Sand	0.5	0.01
Steel	114.86	1.55

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 ¹⁾	kg CO ₂ 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) x 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	BDP275	BDP276LED8-4SDM50	640	5.7	112.3	0.238	0.238	0.178	0.178	0.131	187.5	140.6	140.6	103.1
2	BDP275	BDP276LED10-4SDM50	800	6.9	115.9	0.288	0.288	0.216	0.216	0.158	227.0	170.3	170.3	124.9
3	BDP275	BDP276LED12-4SDM50	960	7.9	121.5	0.329	0.329	0.247	0.247	0.181	259.9	194.9	194.9	143.0
4	BDP275	BDP276LED14-4SDM50	1120	8.9	125.8	0.371	0.371	0.278	0.278	0.204	292.8	219.6	219.6	161.0
5	BDP275	BDP276LED16-4SDM50	1280	10.0	128.0	0.417	0.417	0.313	0.313	0.229	329.0	246.8	246.8	181.0
6	BDP275	BDP276LED18-4SDM50	1440	11.2	128.6	0.467	0.467	0.350	0.350	0.257	368.5	276.4	276.4	202.7
7	BDP275	BDP276LED20-4SDM50	1600	12.4	129.0	0.517	0.517	0.388	0.388	0.284	408.0	306.0	306.0	224.4
8	BDP275	BDP276LED22-4SDM50	1760	13.4	131.3	0.558	0.558	0.419	0.419	0.307	440.9	330.6	330.6	242.5
9	BDP275	BDP276LED24-4SDM50	1920	14.8	129.7	0.617	0.617	0.463	0.463	0.339	486.9	365.2	365.2	267.8
10	BDP275	BDP276LED27-4SDM50	2160	16.6	130.1	0.692	0.692	0.519	0.519	0.380	546.1	409.6	409.6	300.4
11	BDP275	BDP276LED30-4SDM50	2400	18.6	129.0	0.775	0.775	0.581	0.581	0.426	611.9	459.0	459.0	336.6
12	BDP275	BDP276LED35-4SDM50	2800	22.0	127.3	0.917	0.917	0.688	0.688	0.504	723.8	542.9	542.9	398.1
13	BDP275	BDP276LED39-4SDM50	3003	23.0	130.6	0.958	0.958	0.719	0.719	0.527	756.7	567.5	567.5	416.2
14	BDP275	BDP276LED45-4SDM50	3465	27.0	128.3	1.125	1.125	0.844	0.844	0.619	888.3	666.2	666.2	488.6
15	BDP275	BDP276LED50-4SDM50	3850	30.0	128.3	1.250	1.250	0.938	0.938	0.688	987.0	740.3	740.3	542.9
16	BDP275	BDP276LED55-4SDM50	4312	33.0	130.7	1.375	1.375	1.031	1.031	0.756	1085.7	814.3	814.3	597.1

17	BDP275	BDP276LED59-4SDM50	4620	36.0	128.3	1.500	1.500	1.125	1.125	0.825	1184.4	888.3	888.3	651.4
18	BDP275	BDP276LED64-4SDM50	4928	39.5	124.8	1.646	1.646	1.234	1.234	0.905	1299.6	974.7	974.7	714.8
19	BDP275	BDP276LED69-4SDM50	5390	38.5	140.0	1.604	1.604	1.203	1.203	0.882	1266.7	950.0	950.0	696.7
20	BDP275	BDP276LED74-4SDM50	5698	41.5	137.3	1.729	1.729	1.297	1.297	0.951	1365.4	1024.0	1024.0	750.9
21	BDP275	BDP276LED79-4SDM50	6006	44.5	135.0	1.854	1.854	1.391	1.391	1.020	1464.1	1098.0	1098.0	805.2
22	BDP275	BDP276LED84-4SDM50	6384	47.5	134.4	1.979	1.979	1.484	1.484	1.089	1562.8	1172.1	1172.1	859.5
23	BDP275	BDP276LED90-4SDM50	6840	51.0	134.1	2.125	2.125	1.594	1.594	1.169	1677.9	1258.4	1258.4	922.8
24	BDP275	BDP276LED94-4SDM50	7144	53.0	134.8	2.208	2.208	1.656	1.656	1.215	1743.7	1307.8	1307.8	959.0
25	BDP275	BDP276LED100-4SDM50	7500	57.0	131.6	2.375	2.375	1.781	1.781	1.306	1875.3	1406.5	1406.5	1031.4
26	BDP275	BDP276LED8-4SDM50	640	6.0	106.7	0.250	0.250	0.188	0.188	0.138	197.4	148.1	148.1	108.6
27	BDP275	BDP276LED10-4SDM50	800	7.2	111.1	0.300	0.300	0.225	0.225	0.165	236.9	177.7	177.7	130.3
28	BDP275	BDP276LED12-4SDM50	960	8.2	117.1	0.342	0.342	0.256	0.256	0.188	269.8	202.3	202.3	148.4
29	BDP275	BDP276LED14-4SDM50	1120	9.4	119.1	0.392	0.392	0.294	0.294	0.215	309.3	231.9	231.9	170.1
30	BDP275	BDP276LED16-4SDM50	1280	10.6	120.8	0.442	0.442	0.331	0.331	0.243	348.7	261.6	261.6	191.8
31	BDP275	BDP276LED18-4SDM50	1440	11.8	122.0	0.492	0.492	0.369	0.369	0.270	388.2	291.2	291.2	213.5
32	BDP275	BDP276LED20-4SDM50	1600	13.0	123.1	0.542	0.542	0.406	0.406	0.298	427.7	320.8	320.8	235.2
33	BDP275	BDP276LED22-4SDM50	1760	14.2	123.9	0.592	0.592	0.444	0.444	0.325	467.2	350.4	350.4	256.9
34	BDP275	BDP276LED24-4SDM50	1920	15.6	123.1	0.650	0.650	0.488	0.488	0.358	513.2	384.9	384.9	282.3
35	BDP275	BDP276LED27-4SDM50	2160	17.6	122.7	0.733	0.733	0.550	0.550	0.403	579.0	434.3	434.3	318.5
36	BDP275	BDP276LED30-4SDM50	2400	19.8	121.2	0.825	0.825	0.619	0.619	0.454	651.4	488.6	488.6	358.3
37	BDP275	BDP276LED35-4SDM50	2800	23.5	119.1	0.979	0.979	0.734	0.734	0.539	773.2	579.9	579.9	425.2
38	BDP275	BDP276LED39-4SDM50	3003	24.5	122.6	1.021	1.021	0.766	0.766	0.561	806.1	604.5	604.5	443.3
39	BDP275	BDP276LED45-4SDM50	3465	28.5	121.6	1.188	1.188	0.891	0.891	0.653	937.7	703.2	703.2	515.7
40	BDP275	BDP276LED50-4SDM50	3850	32.0	120.3	1.333	1.333	1.000	1.000	0.733	1052.8	789.6	789.6	579.0
41	BDP275	BDP276LED55-4SDM50	4312	35.5	121.5	1.479	1.479	1.109	1.109	0.814	1168.0	876.0	876.0	642.4
42	BDP275	BDP276LED59-4SDM50	4620	38.5	120.0	1.604	1.604	1.203	1.203	0.882	1266.7	950.0	950.0	696.7
43	BDP275	BDP276LED64-4SDM50	4928	38.0	129.7	1.583	1.583	1.188	1.188	0.871	1250.2	937.7	937.7	687.6
44	BDP275	BDP276LED69-4SDM50	5390	41.0	131.5	1.708	1.708	1.281	1.281	0.940	1348.9	1011.7	1011.7	741.9

45	BDP275	BDP276LED74-4SDM50	5698	44.0	129.5	1.833	1.833	1.375	1.375	1.008	1447.6	1085.7	1085.7	796.2
46	BDP275	BDP276LED79-4SDM50	6080	47.5	128.0	1.979	1.979	1.484	1.484	1.089	1562.8	1172.1	1172.1	859.5
47	BDP275	BDP276LED84-4SDM50	6384	51.0	125.2	2.125	2.125	1.594	1.594	1.169	1677.9	1258.4	1258.4	922.8
48	BDP275	BDP276LED90-4SDM50	6840	54.0	126.7	2.250	2.250	1.688	1.688	1.238	1776.6	1332.5	1332.5	977.1
49	BDP275	BDP276LED94-4SDM50	7050	57.0	123.7	2.375	2.375	1.781	1.781	1.306	1875.3	1406.5	1406.5	1031.4
50	BDP275	BDP276LED100-4SDM50	7500	61.0	123.0	2.542	2.542	1.906	1.906	1.398	2006.9	1505.2	1505.2	1103.8
51	BDP275	BDP276LED7-4SDM50	560	5.9	94.9	0.246	0.246	0.184	0.184	0.135	194.1	145.6	145.6	106.8
52	BDP275	BDP276LED9-4SDM50	720	7.2	100.0	0.300	0.300	0.225	0.225	0.165	236.9	177.7	177.7	130.3
53	BDP275	BDP276LED11-4SDM50	880	8.4	104.8	0.350	0.350	0.263	0.263	0.193	276.4	207.3	207.3	152.0
54	BDP275	BDP276LED13-4SDM50	1040	9.7	107.2	0.404	0.404	0.303	0.303	0.222	319.1	239.3	239.3	175.5
55	BDP275	BDP276LED14-4SDM50	1120	10.4	107.7	0.433	0.433	0.325	0.325	0.238	342.2	256.6	256.6	188.2
56	BDP275	BDP276LED16-4SDM50	1280	11.8	108.5	0.492	0.492	0.369	0.369	0.270	388.2	291.2	291.2	213.5
57	BDP275	BDP276LED18-4SDM50	1440	13.2	109.1	0.550	0.550	0.413	0.413	0.303	434.3	325.7	325.7	238.9
58	BDP275	BDP276LED20-4SDM50	1600	14.6	109.6	0.608	0.608	0.456	0.456	0.335	480.3	360.3	360.3	264.2
59	BDP275	BDP276LED22-4SDM50	1760	16.0	110.0	0.667	0.667	0.500	0.500	0.367	526.4	394.8	394.8	289.5
60	BDP275	BDP276LED24-4SDM50	1920	17.6	109.1	0.733	0.733	0.550	0.550	0.403	579.0	434.3	434.3	318.5
61	BDP275	BDP276LED27-4SDM50	2160	20.0	108.0	0.833	0.833	0.625	0.625	0.458	658.0	493.5	493.5	361.9
62	BDP275	BDP276LED30-4SDM50	2400	22.5	106.7	0.938	0.938	0.703	0.703	0.516	740.3	555.2	555.2	407.1
63	BDP275	BDP276LED35-4SDM50	2765	26.5	104.3	1.104	1.104	0.828	0.828	0.607	871.9	653.9	653.9	479.5
64	BDP275	BDP276LED39-4SDM50	3003	27.5	109.2	1.146	1.146	0.859	0.859	0.630	904.8	678.6	678.6	497.6
65	BDP275	BDP276LED45-4SDM50	3465	32.0	108.3	1.333	1.333	1.000	1.000	0.733	1052.8	789.6	789.6	579.0
66	BDP275	BDP276LED50-4SDM50	3850	36.0	106.9	1.500	1.500	1.125	1.125	0.825	1184.4	888.3	888.3	651.4
67	BDP275	BDP276LED55-4SDM50	4256	40.5	105.1	1.688	1.688	1.266	1.266	0.928	1332.5	999.3	999.3	732.8
68	BDP275	BDP276LED59-4SDM50	4620	39.5	117.0	1.646	1.646	1.234	1.234	0.905	1299.6	974.7	974.7	714.8
69	BDP275	BDP276LED64-4SDM50	4928	42.5	116.0	1.771	1.771	1.328	1.328	0.974	1398.3	1048.7	1048.7	769.0
70	BDP275	BDP276LED69-4SDM50	5390	46.5	115.9	1.938	1.938	1.453	1.453	1.066	1529.9	1147.4	1147.4	841.4
71	BDP275	BDP276LED74-4SDM50	5624	50.0	112.5	2.083	2.083	1.563	1.563	1.146	1645.0	1233.8	1233.8	904.8
72	BDP275	BDP276LED79-4SDM50	6080	53.0	114.7	2.208	2.208	1.656	1.656	1.215	1743.7	1307.8	1307.8	959.0

73	BDP275	BDP276LED84-4SDM50	6300	57.0	110.5	2.375	2.375	1.781	1.781	1.306	1875.3	1406.5	1406.5	1031.4
74	BDP275	BDP276LED90-4SDM50	6750	62.0	108.9	2.583	2.583	1.938	1.938	1.421	2039.8	1529.9	1529.9	1121.9
75	BDP275	BDP276LED94-4SDM50	7050	65.0	108.5	2.708	2.708	2.031	2.031	1.490	2138.5	1603.9	1603.9	1176.2
76	BDP275	BDP276LED100-4SDM50	7400	69.0	107.2	2.875	2.875	2.156	2.156	1.581	2270.1	1702.6	1702.6	1248.6
77	BDP275	BDP276LED7-4SDM50	560	6.5	86.2	0.271	0.271	0.203	0.203	0.149	213.9	160.4	160.4	117.6
78	BDP275	BDP276LED9-4SDM50	720	7.8	92.3	0.325	0.325	0.244	0.244	0.179	256.6	192.5	192.5	141.1
79	BDP275	BDP276LED11-4SDM50	880	9.2	95.7	0.383	0.383	0.288	0.288	0.211	302.7	227.0	227.0	166.5
80	BDP275	BDP276LED12-4SDM50	960	10.0	96.0	0.417	0.417	0.313	0.313	0.229	329.0	246.8	246.8	181.0
81	BDP275	BDP276LED14-4SDM50	1120	11.6	96.6	0.483	0.483	0.363	0.363	0.266	381.6	286.2	286.2	209.9
82	BDP275	BDP276LED16-4SDM50	1280	13.0	98.5	0.542	0.542	0.406	0.406	0.298	427.7	320.8	320.8	235.2
83	BDP275	BDP276LED18-4SDM50	1440	14.6	98.6	0.608	0.608	0.456	0.456	0.335	480.3	360.3	360.3	264.2
84	BDP275	BDP276LED20-4SDM50	1600	16.4	97.6	0.683	0.683	0.513	0.513	0.376	539.6	404.7	404.7	296.8
85	BDP275	BDP276LED22-4SDM50	1760	18.0	97.8	0.750	0.750	0.563	0.563	0.413	592.2	444.2	444.2	325.7
86	BDP275	BDP276LED24-4SDM50	1920	19.8	97.0	0.825	0.825	0.619	0.619	0.454	651.4	488.6	488.6	358.3
87	BDP275	BDP276LED27-4SDM50	2160	22.5	96.0	0.938	0.938	0.703	0.703	0.516	740.3	555.2	555.2	407.1
88	BDP275	BDP276LED30-4SDM50	2370	25.5	92.9	1.063	1.063	0.797	0.797	0.584	839.0	629.2	629.2	461.4
89	BDP275	BDP276LED35-4SDM50	2695	27.5	98.0	1.146	1.146	0.859	0.859	0.630	904.8	678.6	678.6	497.6
90	BDP275	BDP276LED39-4SDM50	3003	31.0	96.9	1.292	1.292	0.969	0.969	0.710	1019.9	764.9	764.9	560.9
91	BDP275	BDP276LED45-4SDM50	3465	36.5	94.9	1.521	1.521	1.141	1.141	0.836	1200.9	900.6	900.6	660.5
92	BDP275	BDP276LED50-4SDM50	3850	37.0	104.1	1.542	1.542	1.156	1.156	0.848	1217.3	913.0	913.0	669.5
93	BDP275	BDP276LED55-4SDM50	4158	41.0	101.4	1.708	1.708	1.281	1.281	0.940	1348.9	1011.7	1011.7	741.9
94	BDP275	BDP276LED59-4SDM50	4620	44.0	105.0	1.833	1.833	1.375	1.375	1.008	1447.6	1085.7	1085.7	796.2
95	BDP275	BDP276LED64-4SDM50	4864	48.0	101.3	2.000	2.000	1.500	1.500	1.100	1579.2	1184.4	1184.4	868.6
96	BDP275	BDP276LED69-4SDM50	5320	52.0	102.3	2.167	2.167	1.625	1.625	1.192	1710.8	1283.1	1283.1	940.9
97	BDP275	BDP276LED74-4SDM50	5624	56.0	100.4	2.333	2.333	1.750	1.750	1.283	1842.4	1381.8	1381.8	1013.3

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 ($S_{I_{pep}}$), 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 ($S_{I_{pep}}$) 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	BDP275	BDP276LED8-4SDM50	640	5.7	112.3	0.238	0.130	0.097	0.097	0.071	102.6	76.9	76.9	56.4
2	BDP275	BDP276LED10-4SDM50	800	6.9	115.9	0.288	0.126	0.094	0.094	0.069	99.3	74.5	74.5	54.6
3	BDP275	BDP276LED12-4SDM50	960	7.9	121.5	0.329	0.120	0.090	0.090	0.066	94.8	71.1	71.1	52.1
4	BDP275	BDP276LED14-4SDM50	1120	8.9	125.8	0.371	0.116	0.087	0.087	0.064	91.5	68.6	68.6	50.3
5	BDP275	BDP276LED16-4SDM50	1280	10.0	128.0	0.417	0.114	0.085	0.085	0.063	90.0	67.5	67.5	49.5
6	BDP275	BDP276LED18-4SDM50	1440	11.2	128.6	0.467	0.113	0.085	0.085	0.062	89.6	67.2	67.2	49.3
7	BDP275	BDP276LED20-4SDM50	1600	12.4	129.0	0.517	0.113	0.085	0.085	0.062	89.2	66.9	66.9	49.1
8	BDP275	BDP276LED22-4SDM50	1760	13.4	131.3	0.558	0.111	0.083	0.083	0.061	87.7	65.8	65.8	48.2
9	BDP275	BDP276LED24-4SDM50	1920	14.8	129.7	0.617	0.112	0.084	0.084	0.062	88.8	66.6	66.6	48.8
10	BDP275	BDP276LED27-4SDM50	2160	16.6	130.1	0.692	0.112	0.084	0.084	0.062	88.5	66.4	66.4	48.7
11	BDP275	BDP276LED30-4SDM50	2400	18.6	129.0	0.775	0.113	0.085	0.085	0.062	89.2	66.9	66.9	49.1
12	BDP275	BDP276LED35-4SDM50	2800	22.0	127.3	0.917	0.115	0.086	0.086	0.063	90.5	67.9	67.9	49.8
13	BDP275	BDP276LED39-4SDM50	3003	23.0	130.6	0.958	0.112	0.084	0.084	0.061	88.2	66.1	66.1	48.5
14	BDP275	BDP276LED45-4SDM50	3465	27.0	128.3	1.125	0.114	0.085	0.085	0.063	89.7	67.3	67.3	49.4
15	BDP275	BDP276LED50-4SDM50	3850	30.0	128.3	1.250	0.114	0.085	0.085	0.063	89.7	67.3	67.3	49.4
16	BDP275	BDP276LED55-4SDM50	4312	33.0	130.7	1.375	0.112	0.084	0.084	0.061	88.1	66.1	66.1	48.5
17	BDP275	BDP276LED59-4SDM50	4620	36.0	128.3	1.500	0.114	0.085	0.085	0.063	89.7	67.3	67.3	49.4
18	BDP275	BDP276LED64-4SDM50	4928	39.5	124.8	1.646	0.117	0.088	0.088	0.064	92.3	69.2	69.2	50.8
19	BDP275	BDP276LED69-4SDM50	5390	38.5	140.0	1.604	0.104	0.078	0.078	0.057	82.3	61.7	61.7	45.2
20	BDP275	BDP276LED74-4SDM50	5698	41.5	137.3	1.729	0.106	0.080	0.080	0.058	83.9	62.9	62.9	46.1
21	BDP275	BDP276LED79-4SDM50	6006	44.5	135.0	1.854	0.108	0.081	0.081	0.059	85.3	64.0	64.0	46.9
22	BDP275	BDP276LED84-4SDM50	6384	47.5	134.4	1.979	0.109	0.081	0.081	0.060	85.7	64.3	64.3	47.1
23	BDP275	BDP276LED90-4SDM50	6840	51.0	134.1	2.125	0.109	0.082	0.082	0.060	85.9	64.4	64.4	47.2
24	BDP275	BDP276LED94-4SDM50	7144	53.0	134.8	2.208	0.108	0.081	0.081	0.060	85.4	64.1	64.1	47.0

25	BDP275	BDP276LED100-4SDM50	7500	57.0	131.6	2.375	0.111	0.083	0.083	0.061	87.5	65.6	65.6	48.1
26	BDP275	BDP276LED8-4SDM50	640	6.0	106.7	0.250	0.137	0.103	0.103	0.075	108.0	81.0	81.0	59.4
27	BDP275	BDP276LED10-4SDM50	800	7.2	111.1	0.300	0.131	0.098	0.098	0.072	103.6	77.7	77.7	57.0
28	BDP275	BDP276LED12-4SDM50	960	8.2	117.1	0.342	0.125	0.093	0.093	0.069	98.4	73.8	73.8	54.1
29	BDP275	BDP276LED14-4SDM50	1120	9.4	119.1	0.392	0.122	0.092	0.092	0.067	96.6	72.5	72.5	53.2
30	BDP275	BDP276LED16-4SDM50	1280	10.6	120.8	0.442	0.121	0.091	0.091	0.066	95.4	71.5	71.5	52.4
31	BDP275	BDP276LED18-4SDM50	1440	11.8	122.0	0.492	0.120	0.090	0.090	0.066	94.4	70.8	70.8	51.9
32	BDP275	BDP276LED20-4SDM50	1600	13.0	123.1	0.542	0.118	0.089	0.089	0.065	93.6	70.2	70.2	51.5
33	BDP275	BDP276LED22-4SDM50	1760	14.2	123.9	0.592	0.118	0.088	0.088	0.065	92.9	69.7	69.7	51.1
34	BDP275	BDP276LED24-4SDM50	1920	15.6	123.1	0.650	0.118	0.089	0.089	0.065	93.6	70.2	70.2	51.5
35	BDP275	BDP276LED27-4SDM50	2160	17.6	122.7	0.733	0.119	0.089	0.089	0.065	93.8	70.4	70.4	51.6
36	BDP275	BDP276LED30-4SDM50	2400	19.8	121.2	0.825	0.120	0.090	0.090	0.066	95.0	71.2	71.2	52.2
37	BDP275	BDP276LED35-4SDM50	2800	23.5	119.1	0.979	0.122	0.092	0.092	0.067	96.6	72.5	72.5	53.2
38	BDP275	BDP276LED39-4SDM50	3003	24.5	122.6	1.021	0.119	0.089	0.089	0.065	93.9	70.5	70.5	51.7
39	BDP275	BDP276LED45-4SDM50	3465	28.5	121.6	1.188	0.120	0.090	0.090	0.066	94.7	71.0	71.0	52.1
40	BDP275	BDP276LED50-4SDM50	3850	32.0	120.3	1.333	0.121	0.091	0.091	0.067	95.7	71.8	71.8	52.6
41	BDP275	BDP276LED55-4SDM50	4312	35.5	121.5	1.479	0.120	0.090	0.090	0.066	94.8	71.1	71.1	52.1
42	BDP275	BDP276LED59-4SDM50	4620	38.5	120.0	1.604	0.122	0.091	0.091	0.067	96.0	72.0	72.0	52.8
43	BDP275	BDP276LED64-4SDM50	4928	38.0	129.7	1.583	0.112	0.084	0.084	0.062	88.8	66.6	66.6	48.8
44	BDP275	BDP276LED69-4SDM50	5390	41.0	131.5	1.708	0.111	0.083	0.083	0.061	87.6	65.7	65.7	48.2
45	BDP275	BDP276LED74-4SDM50	5698	44.0	129.5	1.833	0.113	0.084	0.084	0.062	88.9	66.7	66.7	48.9
46	BDP275	BDP276LED79-4SDM50	6080	47.5	128.0	1.979	0.114	0.085	0.085	0.063	90.0	67.5	67.5	49.5
47	BDP275	BDP276LED84-4SDM50	6384	51.0	125.2	2.125	0.117	0.087	0.087	0.064	92.0	69.0	69.0	50.6
48	BDP275	BDP276LED90-4SDM50	6840	54.0	126.7	2.250	0.115	0.086	0.086	0.063	90.9	68.2	68.2	50.0
49	BDP275	BDP276LED94-4SDM50	7050	57.0	123.7	2.375	0.118	0.088	0.088	0.065	93.1	69.8	69.8	51.2
50	BDP275	BDP276LED100-4SDM50	7500	61.0	123.0	2.542	0.119	0.089	0.089	0.065	93.7	70.2	70.2	51.5
51	BDP275	BDP276LED7-4SDM50	560	5.9	94.9	0.246	0.154	0.115	0.115	0.085	121.3	91.0	91.0	66.7
52	BDP275	BDP276LED9-4SDM50	720	7.2	100.0	0.300	0.146	0.109	0.109	0.080	115.2	86.4	86.4	63.3

53	BDP275	BDP276LED11-4SDM50	880	8.4	104.8	0.350	0.139	0.104	0.104	0.077	109.9	82.4	82.4	60.5
54	BDP275	BDP276LED13-4SDM50	1040	9.7	107.2	0.404	0.136	0.102	0.102	0.075	107.4	80.5	80.5	59.1
55	BDP275	BDP276LED14-4SDM50	1120	10.4	107.7	0.433	0.135	0.102	0.102	0.074	106.9	80.2	80.2	58.8
56	BDP275	BDP276LED16-4SDM50	1280	11.8	108.5	0.492	0.134	0.101	0.101	0.074	106.2	79.6	79.6	58.4
57	BDP275	BDP276LED18-4SDM50	1440	13.2	109.1	0.550	0.134	0.100	0.100	0.074	105.6	79.2	79.2	58.1
58	BDP275	BDP276LED20-4SDM50	1600	14.6	109.6	0.608	0.133	0.100	0.100	0.073	105.1	78.8	78.8	57.8
59	BDP275	BDP276LED22-4SDM50	1760	16.0	110.0	0.667	0.133	0.099	0.099	0.073	104.7	78.5	78.5	57.6
60	BDP275	BDP276LED24-4SDM50	1920	17.6	109.1	0.733	0.134	0.100	0.100	0.074	105.6	79.2	79.2	58.1
61	BDP275	BDP276LED27-4SDM50	2160	20.0	108.0	0.833	0.135	0.101	0.101	0.074	106.6	80.0	80.0	58.6
62	BDP275	BDP276LED30-4SDM50	2400	22.5	106.7	0.938	0.137	0.103	0.103	0.075	108.0	81.0	81.0	59.4
63	BDP275	BDP276LED35-4SDM50	2765	26.5	104.3	1.104	0.140	0.105	0.105	0.077	110.4	82.8	82.8	60.7
64	BDP275	BDP276LED39-4SDM50	3003	27.5	109.2	1.146	0.134	0.100	0.100	0.073	105.4	79.1	79.1	58.0
65	BDP275	BDP276LED45-4SDM50	3465	32.0	108.3	1.333	0.135	0.101	0.101	0.074	106.3	79.8	79.8	58.5
66	BDP275	BDP276LED50-4SDM50	3850	36.0	106.9	1.500	0.136	0.102	0.102	0.075	107.7	80.8	80.8	59.2
67	BDP275	BDP276LED55-4SDM50	4256	40.5	105.1	1.688	0.139	0.104	0.104	0.076	109.6	82.2	82.2	60.3
68	BDP275	BDP276LED59-4SDM50	4620	39.5	117.0	1.646	0.125	0.094	0.094	0.069	98.5	73.8	73.8	54.1
69	BDP275	BDP276LED64-4SDM50	4928	42.5	116.0	1.771	0.126	0.094	0.094	0.069	99.3	74.5	74.5	54.6
70	BDP275	BDP276LED69-4SDM50	5390	46.5	115.9	1.938	0.126	0.094	0.094	0.069	99.3	74.5	74.5	54.6
71	BDP275	BDP276LED74-4SDM50	5624	50.0	112.5	2.083	0.130	0.097	0.097	0.071	102.4	76.8	76.8	56.3
72	BDP275	BDP276LED79-4SDM50	6080	53.0	114.7	2.208	0.127	0.095	0.095	0.070	100.4	75.3	75.3	55.2
73	BDP275	BDP276LED84-4SDM50	6300	57.0	110.5	2.375	0.132	0.099	0.099	0.073	104.2	78.1	78.1	57.3
74	BDP275	BDP276LED90-4SDM50	6750	62.0	108.9	2.583	0.134	0.100	0.100	0.074	105.8	79.3	79.3	58.2
75	BDP275	BDP276LED94-4SDM50	7050	65.0	108.5	2.708	0.134	0.101	0.101	0.074	106.2	79.6	79.6	58.4
76	BDP275	BDP276LED100-4SDM50	7400	69.0	107.2	2.875	0.136	0.102	0.102	0.075	107.4	80.5	80.5	59.1
77	BDP275	BDP276LED7-4SDM50	560	6.5	86.2	0.271	0.169	0.127	0.127	0.093	133.7	100.2	100.2	73.5
78	BDP275	BDP276LED9-4SDM50	720	7.8	92.3	0.325	0.158	0.118	0.118	0.087	124.7	93.6	93.6	68.6
79	BDP275	BDP276LED11-4SDM50	880	9.2	95.7	0.383	0.152	0.114	0.114	0.084	120.4	90.3	90.3	66.2
80	BDP275	BDP276LED12-4SDM50	960	10.0	96.0	0.417	0.152	0.114	0.114	0.084	119.9	90.0	90.0	66.0

81	BDP275	BDP276LED14-4SDM50	1120	11.6	96.6	0.483	0.151	0.113	0.113	0.083	119.3	89.4	89.4	65.6
82	BDP275	BDP276LED16-4SDM50	1280	13.0	98.5	0.542	0.148	0.111	0.111	0.081	116.9	87.7	87.7	64.3
83	BDP275	BDP276LED18-4SDM50	1440	14.6	98.6	0.608	0.148	0.111	0.111	0.081	116.7	87.6	87.6	64.2
84	BDP275	BDP276LED20-4SDM50	1600	16.4	97.6	0.683	0.149	0.112	0.112	0.082	118.0	88.5	88.5	64.9
85	BDP275	BDP276LED22-4SDM50	1760	18.0	97.8	0.750	0.149	0.112	0.112	0.082	117.8	88.3	88.3	64.8
86	BDP275	BDP276LED24-4SDM50	1920	19.8	97.0	0.825	0.150	0.113	0.113	0.083	118.7	89.1	89.1	65.3
87	BDP275	BDP276LED27-4SDM50	2160	22.5	96.0	0.938	0.152	0.114	0.114	0.084	119.9	90.0	90.0	66.0
88	BDP275	BDP276LED30-4SDM50	2370	25.5	92.9	1.063	0.157	0.118	0.118	0.086	123.9	92.9	92.9	68.1
89	BDP275	BDP276LED35-4SDM50	2695	27.5	98.0	1.146	0.149	0.112	0.112	0.082	117.5	88.1	88.1	64.6
90	BDP275	BDP276LED39-4SDM50	3003	31.0	96.9	1.292	0.151	0.113	0.113	0.083	118.9	89.2	89.2	65.4
91	BDP275	BDP276LED45-4SDM50	3465	36.5	94.9	1.521	0.154	0.115	0.115	0.084	121.3	91.0	91.0	66.7
92	BDP275	BDP276LED50-4SDM50	3850	37.0	104.1	1.542	0.140	0.105	0.105	0.077	110.7	83.0	83.0	60.9
93	BDP275	BDP276LED55-4SDM50	4158	41.0	101.4	1.708	0.144	0.108	0.108	0.079	113.5	85.2	85.2	62.4
94	BDP275	BDP276LED59-4SDM50	4620	44.0	105.0	1.833	0.139	0.104	0.104	0.076	109.7	82.3	82.3	60.3
95	BDP275	BDP276LED64-4SDM50	4864	48.0	101.3	2.000	0.144	0.108	0.108	0.079	113.6	85.2	85.2	62.5
96	BDP275	BDP276LED69-4SDM50	5320	52.0	102.3	2.167	0.143	0.107	0.107	0.078	112.6	84.4	84.4	61.9
97	BDP275	BDP276LED74-4SDM50	5624	56.0	100.4	2.333	0.145	0.109	0.109	0.080	114.7	86.0	86.0	63.1