

IES INDOOR REPORT

PHOTOMETRIC FILENAME : APX20LL40-UNV-M.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] FO33720.PSO
 [TESTLAB] DAY-BRITE PHOTOMETRIC LABORATORY
 [ISSUE DATE] 10/28/14
 [MANUFAC] SIGNIFY DAY-BRITE - CFI
 [LUMCAT] APX20LL40-UNV-M
 [LUMINAIRE] APX 4-2LP 1.0.1 4000K 2-95W DRIVERS 18K RESISTORS MEDIUM OPTICS DIRA LENS
 [LAMP] LED. LUMINAIRE OUTPUT = 20737 LMS
 [TEST DATE] 10/28/14

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	20737
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	123
Total Luminaire Watts	168.1
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.36
Spacing Criterion (Diagonal)	1.26
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.29 ft
Luminous Width (90-270)	1.17 ft
Luminous Height	0.50 ft



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	9091	11175	8572
55	2972	2312	1409
65	2215	929	1024
75	1364	768	831
85	688	650	983

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CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>	<u>202.5</u>
0.0	11449.58	11449.58	11449.58	11449.58	11449.58	11449.58	11449.58	11449.58	11449.58	11449.58
2.5	11406.10	11420.20	11456.90	11483.80	11530.55	11483.80	11456.90	11420.20	11406.10	11420.20
5.0	11443.80	11453.20	11512.05	11537.85	11558.90	11537.85	11512.05	11453.20	11443.80	11453.20
7.5	11499.95	11513.30	11587.60	11613.50	11625.60	11613.50	11587.60	11513.30	11499.95	11513.30
10.0	11569.90	11596.05	11672.40	11726.55	11721.20	11726.55	11672.40	11596.05	11569.90	11596.05
12.5	11651.90	11704.10	11802.65	11837.00	11829.85	11837.00	11802.65	11704.10	11651.90	11704.10
15.0	11718.60	11815.05	11932.20	11960.70	11940.00	11960.70	11932.20	11815.05	11718.60	11815.05
17.5	11708.20	11876.35	12078.10	12096.75	12056.05	12096.75	12078.10	11876.35	11708.20	11876.35
20.0	11530.00	11788.00	12149.30	12230.20	12186.15	12230.20	12149.30	11788.00	11530.00	11788.00
22.5	11147.00	11531.35	12094.25	12324.55	12275.30	12324.55	12094.25	11531.35	11147.00	11531.35
25.0	10600.00	11088.30	11880.85	12249.20	12179.20	12249.20	11880.85	11088.30	10600.00	11088.30
27.5	9954.19	10526.60	11492.70	11977.55	11856.15	11977.55	11492.70	10526.60	9954.19	10526.60
30.0	9287.70	9908.39	10971.05	11511.60	11383.00	11511.60	10971.05	9908.39	9287.70	9908.39
32.5	8659.32	9280.83	10319.74	10782.84	10652.87	10782.84	10319.74	9280.83	8659.32	9280.83
35.0	7974.14	8638.36	9536.56	9814.76	9666.10	9814.76	9536.56	8638.36	7974.14	8638.36
37.5	7127.15	7931.40	8613.64	8656.92	8396.35	8656.92	8613.64	7931.40	7127.15	7931.40
40.0	6053.18	7072.40	7557.28	7318.76	6999.77	7318.76	7557.28	7072.40	6053.18	7072.40
42.5	4762.89	6011.32	6372.74	5860.19	5485.38	5860.19	6372.74	6011.32	4762.89	6011.32
45.0	3350.20	4742.19	5106.44	4371.56	4038.11	4371.56	5106.44	4742.19	3350.20	4742.19
47.5	2080.95	3390.35	3797.49	3089.83	2906.85	3089.83	3797.49	3390.35	2080.95	3390.35
50.0	1244.91	2160.80	2578.71	2011.40	1949.38	2011.40	2578.71	2160.80	1244.91	2160.80
52.5	959.47	1286.67	1608.07	1228.69	1181.88	1228.69	1608.07	1286.67	959.47	1286.67
55.0	928.07	794.13	959.06	714.18	607.61	714.18	959.06	794.13	928.07	794.13
57.5	849.17	586.52	594.10	485.75	476.85	485.75	594.10	586.52	849.17	586.52
60.0	718.55	505.73	440.66	429.92	439.84	429.92	440.66	505.73	718.55	505.73
62.5	619.29	444.70	378.89	394.39	431.95	394.39	378.89	444.70	619.29	444.70
65.0	546.18	386.48	334.45	378.92	387.01	378.92	334.45	386.48	546.18	386.48
67.5	461.49	330.63	299.85	341.27	351.89	341.27	299.85	330.63	461.49	330.63
70.0	385.20	279.09	272.38	316.62	332.68	316.62	272.38	279.09	385.20	279.09
72.5	300.44	228.66	250.52	285.04	285.30	285.04	250.52	228.66	300.44	228.66
75.0	236.43	183.88	226.06	248.29	260.56	248.29	226.06	183.88	236.43	183.88
77.5	202.38	149.21	194.05	234.03	268.40	234.03	194.05	149.21	202.38	149.21
80.0	147.44	122.57	170.63	210.23	241.95	210.23	170.63	122.57	147.44	122.57
82.5	98.50	101.11	147.94	195.76	249.81	195.76	147.94	101.11	98.50	101.11
85.0	65.25	86.14	142.75	192.83	235.32	192.83	142.75	86.14	65.25	86.14
87.5	37.70	72.40	132.82	162.11	194.49	162.11	132.82	72.40	37.70	72.40
90.0	18.04	58.48	113.55	133.17	169.76	133.17	113.55	58.48	18.04	58.48
92.5	17.93	46.87	79.08	111.46	169.55	111.46	79.08	46.87	17.93	46.87
95.0	23.26	34.15	51.54	67.17	110.41	67.17	51.54	34.15	23.26	34.15
97.5	30.44	24.09	33.24	43.68	54.62	43.68	33.24	24.09	30.44	24.09
100.0	31.99	22.59	30.80	39.65	44.22	39.65	30.80	22.59	31.99	22.59
102.5	30.87	22.15	31.90	38.87	42.45	38.87	31.90	22.15	30.87	22.15
105.0	26.79	21.70	31.84	38.67	40.81	38.67	31.84	21.70	26.79	21.70
107.5	22.28	20.69	30.88	37.93	40.12	37.93	30.88	20.69	22.28	20.69
110.0	19.17	19.15	29.04	36.61	38.98	36.61	29.04	19.15	19.17	19.15
112.5	16.06	17.01	27.14	34.52	37.57	34.52	27.14	17.01	16.06	17.01
115.0	13.49	15.06	25.18	32.01	35.27	32.01	25.18	15.06	13.49	15.06
117.5	11.17	13.65	23.14	29.81	32.82	29.81	23.14	13.65	11.17	13.65
120.0	9.52	12.63	21.76	27.51	30.44	27.51	21.76	12.63	9.52	12.63
122.5	8.40	11.45	20.94	25.86	28.40	25.86	20.94	11.45	8.40	11.45
125.0	7.50	10.60	21.23	24.41	27.07	24.41	21.23	10.60	7.50	10.60
127.5	7.05	9.22	21.13	24.06	26.54	24.06	21.13	9.22	7.05	9.22
130.0	6.91	7.87	18.33	24.36	27.40	24.36	18.33	7.87	6.91	7.87
132.5	6.82	6.96	18.15	24.23	27.92	24.23	18.15	6.96	6.82	6.96

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135.0	6.35	5.71	16.01	20.84	23.55	20.84	16.01	5.71	6.35	5.71
137.5	5.46	4.61	12.11	20.02	21.51	20.02	12.11	4.61	5.46	4.61
140.0	4.74	3.97	9.45	19.38	20.96	19.38	9.45	3.97	4.74	3.97
142.5	3.85	3.43	7.35	15.30	20.60	15.30	7.35	3.43	3.85	3.43
145.0	3.62	3.13	5.78	12.49	15.37	12.49	5.78	3.13	3.62	3.13
147.5	3.14	2.85	4.28	10.24	12.30	10.24	4.28	2.85	3.14	2.85
150.0	2.88	2.52	3.44	8.40	10.29	8.40	3.44	2.52	2.88	2.52
152.5	2.75	2.36	2.97	6.61	8.36	6.61	2.97	2.36	2.75	2.36
155.0	2.61	2.50	2.57	5.12	6.63	5.12	2.57	2.50	2.61	2.50
157.5	2.92	2.80	2.95	4.69	5.96	4.69	2.95	2.80	2.92	2.80
160.0	3.18	3.05	3.02	3.53	4.98	3.53	3.02	3.05	3.18	3.05
162.5	3.41	3.24	3.23	3.62	3.80	3.62	3.23	3.24	3.41	3.24
165.0	3.57	3.34	3.25	3.64	3.71	3.64	3.25	3.34	3.57	3.34
167.5	3.45	3.32	3.27	3.62	3.56	3.62	3.27	3.32	3.45	3.32
170.0	3.45	3.37	3.22	3.62	3.57	3.62	3.22	3.37	3.45	3.37
172.5	3.95	3.70	3.58	3.69	3.94	3.69	3.58	3.70	3.95	3.70
175.0	4.03	3.93	3.74	3.80	4.00	3.80	3.74	3.93	4.03	3.93
177.5	4.15	4.38	3.79	3.99	3.97	3.99	3.79	4.38	4.15	4.38
180.0	4.09	4.09	4.09	4.09	4.09	4.09	4.09	4.09	4.09	4.09

Vert. Angles **Horizontal Angles**

	<u>225.0</u>	<u>247.5</u>	<u>270.0</u>	<u>292.5</u>	<u>315.0</u>	<u>337.5</u>	<u>360.0</u>
0.0	11449.58	11449.58	11449.58	11449.58	11449.58	11449.58	11449.58
2.5	11456.90	11483.80	11530.55	11483.80	11456.90	11420.20	11406.10
5.0	11512.05	11537.85	11558.90	11537.85	11512.05	11453.20	11443.80
7.5	11587.60	11613.50	11625.60	11613.50	11587.60	11513.30	11499.95
10.0	11672.40	11726.55	11721.20	11726.55	11672.40	11596.05	11569.90
12.5	11802.65	11837.00	11829.85	11837.00	11802.65	11704.10	11651.90
15.0	11932.20	11960.70	11940.00	11960.70	11932.20	11815.05	11718.60
17.5	12078.10	12096.75	12056.05	12096.75	12078.10	11876.35	11708.20
20.0	12149.30	12230.20	12186.15	12230.20	12149.30	11788.00	11530.00
22.5	12094.25	12324.55	12275.30	12324.55	12094.25	11531.35	11147.00
25.0	11880.85	12249.20	12179.20	12249.20	11880.85	11088.30	10600.00
27.5	11492.70	11977.55	11856.15	11977.55	11492.70	10526.60	9954.19
30.0	10971.05	11511.60	11383.00	11511.60	10971.05	9908.39	9287.70
32.5	10319.74	10782.84	10652.87	10782.84	10319.74	9280.83	8659.32
35.0	9536.56	9814.76	9666.10	9814.76	9536.56	8638.36	7974.14
37.5	8613.64	8656.92	8396.35	8656.92	8613.64	7931.40	7127.15
40.0	7557.28	7318.76	6999.77	7318.76	7557.28	7072.40	6053.18
42.5	6372.74	5860.19	5485.38	5860.19	6372.74	6011.32	4762.89
45.0	5106.44	4371.56	4038.11	4371.56	5106.44	4742.19	3350.20
47.5	3797.49	3089.83	2906.85	3089.83	3797.49	3390.35	2080.95
50.0	2578.71	2011.40	1949.38	2011.40	2578.71	2160.80	1244.91
52.5	1608.07	1228.69	1181.88	1228.69	1608.07	1286.67	959.47
55.0	959.06	714.18	607.61	714.18	959.06	794.13	928.07
57.5	594.10	485.75	476.85	485.75	594.10	586.52	849.17
60.0	440.66	429.92	439.84	429.92	440.66	505.73	718.55
62.5	378.89	394.39	431.95	394.39	378.89	444.70	619.29
65.0	334.45	378.92	387.01	378.92	334.45	386.48	546.18
67.5	299.85	341.27	351.89	341.27	299.85	330.63	461.49
70.0	272.38	316.62	332.68	316.62	272.38	279.09	385.20
72.5	250.52	285.04	285.30	285.04	250.52	228.66	300.44
75.0	226.06	248.29	260.56	248.29	226.06	183.88	236.43
77.5	194.05	234.03	268.40	234.03	194.05	149.21	202.38
80.0	170.63	210.23	241.95	210.23	170.63	122.57	147.44

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CANDELA TABULATION - (Cont.)

82.5	147.94	195.76	249.81	195.76	147.94	101.11	98.50
85.0	142.75	192.83	235.32	192.83	142.75	86.14	65.25
87.5	132.82	162.11	194.49	162.11	132.82	72.40	37.70
90.0	113.55	133.17	169.76	133.17	113.55	58.48	18.04
92.5	79.08	111.46	169.55	111.46	79.08	46.87	17.93
95.0	51.54	67.17	110.41	67.17	51.54	34.15	23.26
97.5	33.24	43.68	54.62	43.68	33.24	24.09	30.44
100.0	30.80	39.65	44.22	39.65	30.80	22.59	31.99
102.5	31.90	38.87	42.45	38.87	31.90	22.15	30.87
105.0	31.84	38.67	40.81	38.67	31.84	21.70	26.79
107.5	30.88	37.93	40.12	37.93	30.88	20.69	22.28
110.0	29.04	36.61	38.98	36.61	29.04	19.15	19.17
112.5	27.14	34.52	37.57	34.52	27.14	17.01	16.06
115.0	25.18	32.01	35.27	32.01	25.18	15.06	13.49
117.5	23.14	29.81	32.82	29.81	23.14	13.65	11.17
120.0	21.76	27.51	30.44	27.51	21.76	12.63	9.52
122.5	20.94	25.86	28.40	25.86	20.94	11.45	8.40
125.0	21.23	24.41	27.07	24.41	21.23	10.60	7.50
127.5	21.13	24.06	26.54	24.06	21.13	9.22	7.05
130.0	18.33	24.36	27.40	24.36	18.33	7.87	6.91
132.5	18.15	24.23	27.92	24.23	18.15	6.96	6.82
135.0	16.01	20.84	23.55	20.84	16.01	5.71	6.35
137.5	12.11	20.02	21.51	20.02	12.11	4.61	5.46
140.0	9.45	19.38	20.96	19.38	9.45	3.97	4.74
142.5	7.35	15.30	20.60	15.30	7.35	3.43	3.85
145.0	5.78	12.49	15.37	12.49	5.78	3.13	3.62
147.5	4.28	10.24	12.30	10.24	4.28	2.85	3.14
150.0	3.44	8.40	10.29	8.40	3.44	2.52	2.88
152.5	2.97	6.61	8.36	6.61	2.97	2.36	2.75
155.0	2.57	5.12	6.63	5.12	2.57	2.50	2.61
157.5	2.95	4.69	5.96	4.69	2.95	2.80	2.92
160.0	3.02	3.53	4.98	3.53	3.02	3.05	3.18
162.5	3.23	3.62	3.80	3.62	3.23	3.24	3.41
165.0	3.25	3.64	3.71	3.64	3.25	3.34	3.57
167.5	3.27	3.62	3.56	3.62	3.27	3.32	3.45
170.0	3.22	3.62	3.57	3.62	3.22	3.37	3.45
172.5	3.58	3.69	3.94	3.69	3.58	3.70	3.95
175.0	3.74	3.80	4.00	3.80	3.74	3.93	4.03
177.5	3.79	3.99	3.97	3.99	3.79	4.38	4.15
180.0	4.09	4.09	4.09	4.09	4.09	4.09	4.09

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	4472.56	N.A.	21.60
0-30	9793.14	N.A.	47.20
0-40	15458.99	N.A.	74.50
0-60	19791.14	N.A.	95.40
0-80	20426.3	N.A.	98.50
0-90	20577.8	N.A.	99.20
10-90	19474.87	N.A.	93.90
20-40	10986.43	N.A.	53.00
20-50	14439.66	N.A.	69.60
40-70	4720.58	N.A.	22.80
60-80	635.16	N.A.	3.10
70-80	246.73	N.A.	1.20
80-90	151.50	N.A.	0.70
90-110	98.53	N.A.	0.50
90-120	122.68	N.A.	0.60
90-130	139.32	N.A.	0.70
90-150	155.66	N.A.	0.80
90-180	158.88	N.A.	0.80
110-180	60.36	N.A.	0.30
0-180	20736.68	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	1102.92
10-20	3369.64
20-30	5320.57
30-40	5665.85
40-50	3453.24
50-60	878.91
60-70	388.43
70-80	246.73
80-90	151.50
90-100	65.53
100-110	33.00
110-120	24.16
120-130	16.63
130-140	11.26
140-150	5.09
150-160	1.89
160-170	0.97
170-180	0.36

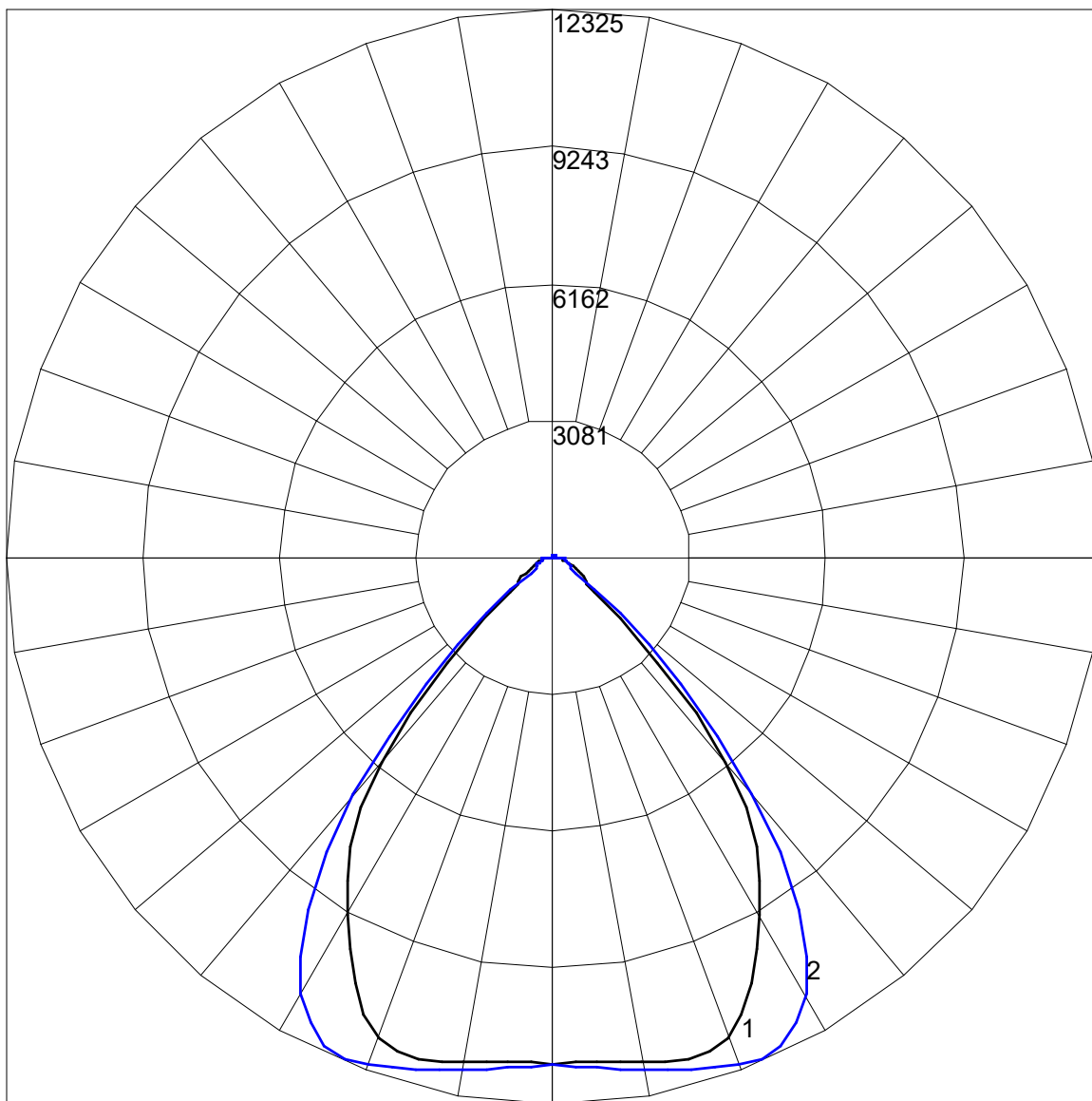
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	101	101	101	99
1	112	108	105	103	109	106	103	101	102	100	98	98	96	95	94	93	92	90
2	105	99	94	90	102	97	92	88	93	90	86	90	87	84	87	85	82	81
3	98	90	84	79	96	89	83	78	86	81	77	83	79	76	81	77	74	73
4	92	82	76	71	90	81	75	70	79	73	69	77	72	68	74	71	67	65
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59
6	80	70	62	57	79	69	62	57	67	61	56	65	60	56	64	59	55	54
7	75	64	57	52	74	63	57	52	62	56	51	61	55	51	59	54	51	49
8	71	59	52	47	69	59	52	47	57	51	47	56	51	47	55	50	46	45
9	66	55	48	43	65	55	48	43	53	47	43	52	47	43	51	46	43	41
10	63	51	44	40	61	51	44	40	50	44	40	49	43	39	48	43	39	38

POLAR GRAPH



Maximum Candela = 12324.55 Located At Horizontal Angle = 67.5, Vertical Angle = 22.5
1 - Vertical Plane Through Horizontal Angles (0 - 180)
2 - Vertical Plane Through Horizontal Angles (90 - 270)