

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: METALUX

Report Number: P894164

Luminaire Tested: 4MB-SC3-ASML-UNV-CC93-HI-5000K

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894164
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-33)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-SC3-ASML-UNV-CC93-HI-5000K
Description: Selectable 4FT MICROBAY LINEAR BAY with ASYMMETRIC LENS, 90CRI, 5000K CCT, HI lumen setting
Light Source: -
Ballast/Driver: -

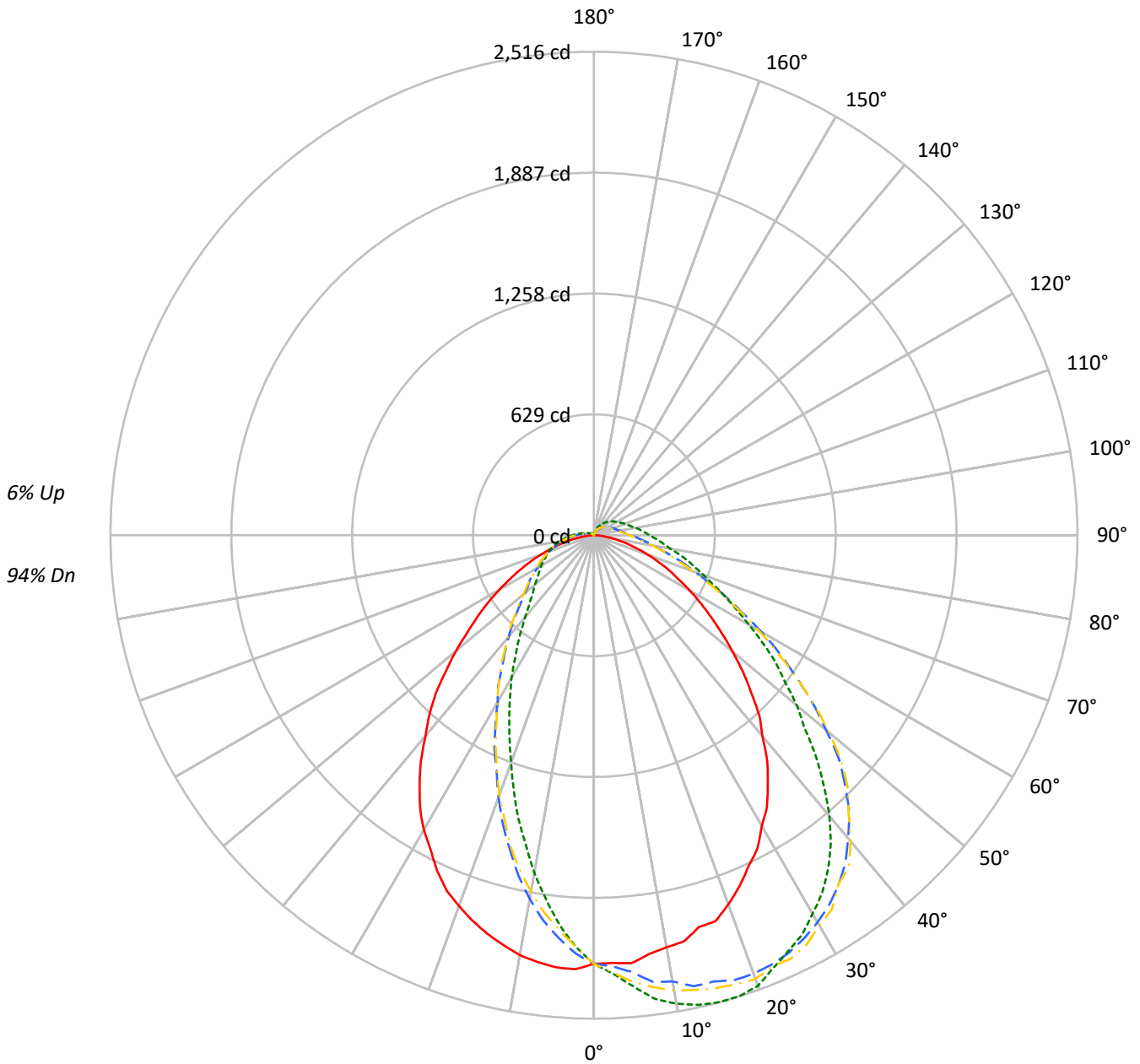
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5558.0 lumens
Efficiency: N/A
Efficacy: 109.6 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.07 / 1.25
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 3.98' x H: 0.12')
CIE Type: Direct

Input Watts (W): 50.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.996
Total Harmonic Distortion (THDi): 5.39961257980444
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot



— 0°-180° - - 45°-225° ··· 90°-270° - · 135°-315°



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				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	50	30	10	0
RCR																					
0	118	118	118	118	114	114	114	114	108	108	108	102	102	102	97	97	97	97	97	97	94
1	107	103	98	94	104	100	96	92	95	91	88	90	87	85	85	83	81	81	81	81	79
2	98	90	83	78	95	88	82	76	83	78	74	79	75	71	75	72	69	69	69	69	66
3	90	80	72	65	87	78	70	64	74	68	63	70	65	61	67	63	59	59	59	59	57
4	83	71	63	56	80	69	61	55	66	59	54	63	57	53	60	55	51	51	51	51	49
5	76	64	55	49	74	62	54	48	60	53	47	57	51	46	55	49	45	45	45	45	43
6	71	58	49	43	68	56	48	42	54	47	42	52	46	41	50	44	40	40	40	40	38
7	66	53	44	38	64	51	43	38	49	42	37	48	41	36	46	40	36	36	36	36	34
8	61	48	40	34	59	47	39	34	45	38	33	44	37	33	42	37	32	32	32	32	30
9	57	44	36	31	56	43	36	31	42	35	30	40	34	30	39	33	29	29	29	29	28
10	54	41	33	28	52	40	33	28	39	32	28	38	31	27	36	31	27	27	27	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	22711	22711	22711	22711
5°	22794	23143	23010	20003
10°	22386	23637	22821	17048
15°	22070	23552	22445	14254
20°	21900	23086	21993	11662
25°	21065	22015	21357	9595
30°	20182	21039	20444	7927
35°	19187	19857	19240	6459
40°	17658	18164	17649	5296
45°	16151	16033	16232	4512
50°	14363	13994	14296	4077
55°	12657	12259	12570	3745
60°	11102	10455	11001	3539
65°	9726	9003	9496	3363
70°	8267	7889	7985	3214
75°	6738	7172	6558	3096
80°	5197	6455	4724	2884
85°	3577	6234	2889	2702

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 157.5°
 Vertical Angle: 45°
 Luminance: 22466 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	209.5	3.8
10°-20°	582.4	10.5
20°-30°	837.7	15.1
30°-40°	950.6	17.1
40°-50°	908.5	16.3
50°-60°	738.2	13.3
60°-70°	515.1	9.3
70°-80°	319.1	5.7
80°-90°	183.0	3.3
90°-100°	109.4	2.0
100°-110°	71.8	1.3
110°-120°	50.3	0.9
120°-130°	36.5	0.7
130°-140°	24.2	0.4
140°-150°	13.7	0.2
150°-160°	6.1	0.1
160°-170°	1.8	0.0
170°-180°	0.2	0.0
0°-30°	1629.6	29.3
0°-40°	2580.2	46.4
0°-60°	4226.9	76.0
0°-90°	5244.1	94.4
90°-120°	231.6	4.2
90°-150°	306.0	5.5
90°-180°	314.0	5.6
0°-180°	5558.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2230	2230	2230	2230	2230	
5°	2236	2357	2257	2037	2236	211
15°	2111	2516	2147	1522	2111	600
25°	1902	2389	1928	1041	1902	877
35°	1577	2123	1582	691	1577	983
45°	1157	1637	1162	461	1157	893
55°	745	1154	740	353	745	670
65°	431	751	421	280	431	428
75°	191	502	186	217	191	206
85°	42	340	34	148	42	47
90°	2	288	0	113	2	3
95°	2	250	0	86	2	2
105°	2	193	0	47	2	2
115°	2	153	0	26	2	1
125°	2	125	0	17	2	1
135°	2	99	0	13	2	1
145°	2	70	0	9	2	1
155°	2	44	0	5	2	1
165°	2	20	0	2	2	1
175°	2	1	0	0	2	0
180°	1	1	1	1	1	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2230.0	2230.0	2230.0	2230.0	2230.0	2230.0	2230.0	2230.0	2230.0	2230.0	2230.0
2.5°	2227.8	2244.6	2246.0	2298.6	2283.3	2303.0	2278.2	2282.5	2260.6	2254.8	2178.9
5°	2235.8	2271.6	2281.1	2371.6	2357.0	2367.2	2332.9	2308.1	2257.0	2226.3	2103.6
7.5°	2197.8	2292.0	2344.6	2408.9	2433.0	2441.0	2371.6	2325.6	2240.9	2165.7	2021.9
10°	2176.7	2306.6	2357.7	2454.1	2475.3	2460.0	2405.9	2330.0	2219.0	2097.8	1921.1
12.5°	2165.0	2314.7	2403.7	2502.3	2503.1	2487.0	2423.5	2341.7	2183.2	2024.8	1814.5
15°	2110.9	2313.2	2404.5	2504.5	2515.5	2505.2	2440.3	2333.6	2146.7	1934.2	1691.8
17.5°	2105.1	2309.6	2427.8	2533.0	2514.7	2507.4	2450.5	2330.0	2102.9	1842.2	1576.5
20°	2043.8	2301.5	2427.8	2500.9	2495.0	2497.9	2457.0	2324.9	2052.5	1742.9	1450.1
22.5°	1978.8	2292.0	2417.6	2473.1	2438.1	2491.4	2427.8	2311.0	2001.4	1639.2	1324.5
25°	1902.1	2276.7	2397.9	2433.7	2389.1	2430.8	2430.0	2289.8	1928.4	1527.5	1225.2
27.5°	1840.0	2252.6	2365.8	2419.8	2343.9	2379.7	2400.1	2264.3	1842.2	1417.3	1108.4
30°	1747.3	2221.9	2327.1	2335.1	2275.2	2320.5	2343.9	2232.2	1770.0	1292.4	1001.8
32.5°	1676.5	2186.9	2279.6	2268.7	2208.8	2268.7	2306.6	2200.0	1683.8	1182.9	926.6
35°	1577.2	2144.5	2220.5	2162.8	2123.4	2173.0	2217.6	2165.7	1581.6	1066.1	830.2
37.5°	1480.8	2107.3	2149.6	2078.1	2024.1	2079.5	2177.4	2101.5	1478.6	973.3	758.7
40°	1363.2	2021.9	2056.9	1959.8	1905.8	1987.5	2077.4	2046.0	1362.5	876.9	689.3
42.5°	1274.2	1958.3	1968.6	1835.7	1771.4	1858.3	1960.5	1967.1	1268.3	790.1	628.0
45°	1156.6	1869.3	1850.3	1704.2	1637.1	1715.2	1868.5	1886.0	1162.4	714.8	568.1
47.5°	1050.7	1770.0	1732.7	1561.9	1486.6	1579.4	1749.5	1795.5	1044.2	645.5	511.9
50°	940.5	1659.0	1576.5	1429.0	1378.6	1424.6	1598.4	1674.3	936.1	576.8	468.8
52.5°	839.7	1536.3	1434.1	1301.9	1251.5	1289.5	1439.9	1553.8	828.8	519.2	430.8
55°	744.8	1413.6	1281.5	1164.6	1154.4	1166.1	1279.3	1410.0	739.7	468.0	406.7
57.5°	660.1	1264.7	1144.2	1058.0	1039.8	1049.3	1127.4	1261.7	653.5	416.9	371.7
60°	574.7	1112.1	1008.4	941.9	931.7	939.0	989.4	1117.2	569.5	373.9	338.8
62.5°	497.3	958.7	866.7	841.9	834.6	834.6	855.8	972.6	490.7	330.0	314.0
65°	430.8	827.3	757.9	748.4	750.6	749.9	736.7	812.0	420.6	291.3	292.1
67.5°	363.6	687.8	649.1	660.8	669.6	665.9	638.2	675.4	354.9	256.3	272.4
70°	301.6	568.1	560.8	587.1	607.5	588.5	548.4	552.0	291.3	222.0	246.8
72.5°	243.1	459.3	492.9	529.4	549.1	527.9	472.4	456.4	234.4	190.6	223.4
75°	191.3	369.5	422.8	476.8	502.4	475.3	411.1	356.3	186.2	160.6	204.4
77.5°	146.0	292.8	361.4	424.2	449.1	425.7	357.8	278.2	136.5	135.1	184.0
80°	104.4	231.5	320.5	381.2	403.8	381.2	310.3	219.8	94.9	108.1	162.1
82.5°	68.6	178.9	278.9	346.8	371.7	343.9	269.4	169.4	60.6	87.6	146.0
85°	41.6	141.7	243.1	311.8	340.3	313.2	235.8	128.5	33.6	67.2	127.1
87.5°	18.3	109.5	216.9	287.7	313.2	288.4	210.3	100.8	13.9	52.6	108.8
90°	1.5	86.9	191.3	265.1	287.7	264.3	186.2	81.8	0.0	38.0	93.5
92.5°	1.5	74.5	175.2	245.3	270.9	244.6	167.9	67.2	0.0	27.7	78.9
95°	2.2	62.8	159.2	230.0	250.5	227.8	153.3	57.7	0.0	19.0	66.4
97.5°	2.2	57.0	146.0	214.7	237.3	213.2	140.2	51.8	0.0	13.9	54.0
100°	1.5	52.6	135.8	200.1	221.2	198.6	130.0	46.7	0.0	8.8	43.8
102.5°	1.5	48.9	127.1	187.7	204.4	185.5	121.2	43.8	0.0	7.3	35.8
105°	1.5	46.7	119.0	173.1	192.8	173.1	113.9	40.9	0.0	5.8	27.7
107.5°	1.5	43.8	113.2	165.0	181.1	163.6	108.1	38.7	0.0	5.8	22.6
110°	1.5	41.6	108.1	153.3	171.6	154.8	103.0	35.0	0.0	3.7	18.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	1.5	38.0	103.0	145.3	162.8	146.0	98.6	32.1	0.0	3.7	16.1
115°	1.5	34.3	98.6	140.2	153.3	138.7	94.2	28.5	0.0	2.9	14.6
117.5°	1.5	32.1	95.7	133.6	146.8	132.2	90.5	27.0	0.0	2.9	13.9
120°	1.5	30.7	91.3	127.1	137.3	125.6	86.2	25.6	0.0	2.9	13.1
122.5°	1.5	29.2	87.6	121.2	132.2	120.5	82.5	24.8	0.0	2.2	11.7
125°	1.5	27.7	82.5	114.6	124.9	113.2	75.9	24.1	0.0	1.5	10.2
127.5°	1.5	26.3	77.4	109.5	119.0	108.1	71.6	23.4	0.0	1.5	9.5
130°	1.5	25.6	70.8	103.0	112.4	101.5	66.4	23.4	0.0	1.5	8.8
132.5°	1.5	24.8	63.5	96.4	106.6	94.9	61.3	22.6	0.0	1.5	7.3
135°	1.5	24.1	56.2	89.8	99.3	88.4	57.0	21.9	0.0	1.5	6.6
137.5°	1.5	22.6	49.7	82.5	92.0	81.0	54.0	20.4	0.0	1.5	5.8
140°	1.5	21.2	44.5	76.7	84.7	74.5	49.7	19.0	0.0	0.7	4.4
142.5°	1.5	19.0	40.2	69.4	77.4	67.9	44.5	16.1	0.0	0.7	4.4
145°	1.5	16.8	36.5	60.6	70.1	60.6	41.6	14.6	0.0	0.7	3.7
147.5°	1.5	15.3	32.9	51.1	63.5	55.5	37.2	12.4	0.0	0.7	2.9
150°	1.5	13.9	28.5	43.1	56.2	48.9	34.3	11.0	0.0	0.0	2.2
152.5°	1.5	12.4	24.8	35.8	50.4	44.5	30.7	9.5	0.0	0.0	1.5
155°	2.2	11.7	21.2	31.4	43.8	38.7	25.6	8.0	0.0	0.0	1.5
157.5°	2.2	10.2	17.5	25.6	38.7	33.6	20.4	6.6	0.0	0.0	0.7
160°	2.2	9.5	14.6	19.7	32.1	27.7	16.8	5.1	0.0	0.0	0.7
162.5°	2.2	8.8	12.4	14.6	26.3	21.9	13.1	3.7	0.0	0.0	0.7
165°	2.2	7.3	11.0	10.2	20.4	16.8	10.2	2.2	0.0	0.0	0.0
167.5°	2.2	6.6	8.8	7.3	15.3	12.4	7.3	1.5	0.0	0.0	0.0
170°	2.2	5.1	7.3	5.1	4.4	8.0	4.4	0.7	0.0	0.0	0.0
172.5°	2.2	4.4	5.8	3.7	1.5	4.4	2.2	0.0	0.0	0.0	0.0
175°	2.2	3.7	3.7	2.2	0.7	1.5	0.0	0.0	0.0	0.0	0.0
177.5°	2.2	2.9	2.2	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2230.0	2230.0	2230.0	2230.0	2230.0	2230.0
2.5°	2168.6	2144.5	2122.6	2146.0	2162.8	2227.8
5°	2062.8	2037.2	2040.1	2061.3	2117.5	2235.8
7.5°	1953.2	1910.9	1921.1	1980.2	2063.5	2197.8
10°	1824.0	1785.3	1794.8	1883.9	2000.7	2176.7
12.5°	1708.6	1643.6	1699.1	1783.1	1927.7	2165.0
15°	1573.5	1522.4	1552.4	1676.5	1857.6	2110.9
17.5°	1427.5	1388.1	1423.8	1547.2	1771.4	2105.1
20°	1315.1	1260.3	1302.6	1438.5	1664.8	2043.8
22.5°	1188.7	1147.1	1191.7	1316.5	1556.0	1978.8
25°	1085.0	1041.2	1085.8	1209.9	1459.6	1902.1
27.5°	984.3	944.1	984.3	1098.2	1364.0	1840.0
30°	895.9	857.2	898.1	1007.6	1252.3	1747.3
32.5°	813.4	763.8	816.3	922.2	1153.7	1676.5
35°	728.0	690.7	730.2	847.7	1044.2	1577.2
37.5°	657.2	618.5	665.2	766.0	951.4	1480.8
40°	590.0	555.7	592.9	700.2	872.6	1363.2
42.5°	537.4	503.1	541.1	640.4	793.0	1274.2
45°	486.3	460.7	491.4	574.7	712.7	1156.6
47.5°	449.1	427.2	452.7	526.5	645.5	1050.7
50°	416.9	401.6	419.9	478.3	576.1	940.5
52.5°	388.5	373.1	394.3	441.0	521.3	839.7
55°	366.5	352.7	368.7	406.0	466.6	744.8
57.5°	342.5	333.7	346.1	368.7	423.5	660.1
60°	324.9	315.4	328.6	346.8	374.6	574.7
62.5°	305.2	300.1	308.1	322.7	337.3	497.3
65°	287.7	280.4	290.6	295.7	294.3	430.8
67.5°	268.7	266.5	272.4	273.1	262.1	363.6
70°	249.0	247.5	254.8	250.5	227.8	301.6
72.5°	232.9	232.9	237.3	228.5	198.6	243.1
75°	215.4	216.9	220.5	210.3	167.2	191.3
77.5°	199.3	200.8	201.5	187.7	140.2	146.0
80°	181.1	180.4	187.7	170.1	113.9	104.4
82.5°	165.0	162.1	166.5	149.0	92.0	68.6
85°	146.8	147.5	150.4	130.0	73.7	41.6
87.5°	132.2	132.2	135.1	114.6	55.5	18.3
90°	114.6	113.2	117.6	97.1	41.6	1.5
92.5°	100.0	100.0	103.0	83.2	30.7	1.5
95°	85.4	86.2	88.4	68.6	23.4	2.2
97.5°	73.0	73.7	76.7	58.4	16.8	2.2
100°	62.1	62.8	64.3	46.7	13.1	1.5
102.5°	51.8	54.0	54.0	38.7	10.2	1.5
105°	43.8	46.7	45.3	31.4	9.5	1.5
107.5°	36.5	39.4	39.4	25.6	9.5	1.5
110°	29.9	34.3	33.6	21.9	7.3	1.5



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	25.6	29.2	27.0	19.0	7.3	1.5
115°	21.9	25.6	24.1	17.5	6.6	1.5
117.5°	19.7	21.9	21.9	16.8	6.6	1.5
120°	18.3	20.4	19.7	16.1	6.6	1.5
122.5°	16.8	18.3	18.3	14.6	5.8	1.5
125°	16.1	16.8	17.5	13.1	5.8	1.5
127.5°	15.3	16.8	16.8	12.4	5.1	1.5
130°	13.9	15.3	15.3	11.7	5.1	1.5
132.5°	12.4	13.9	13.9	11.0	5.1	1.5
135°	11.7	13.1	13.1	10.2	5.1	1.5
137.5°	11.0	11.7	11.7	9.5	5.1	1.5
140°	9.5	11.0	11.0	8.8	5.1	1.5
142.5°	8.8	10.2	10.2	8.0	4.4	1.5
145°	8.0	8.8	9.5	7.3	4.4	1.5
147.5°	6.6	8.0	8.8	6.6	4.4	1.5
150°	5.1	7.3	7.3	6.6	4.4	1.5
152.5°	3.7	6.6	6.6	5.8	3.7	1.5
155°	2.9	5.1	5.8	5.1	3.7	2.2
157.5°	2.2	4.4	5.1	5.1	3.7	2.2
160°	1.5	3.7	4.4	4.4	2.9	2.2
162.5°	0.7	2.9	3.7	4.4	2.9	2.2
165°	0.0	2.2	2.9	3.7	2.9	2.2
167.5°	0.0	1.5	2.2	2.9	2.2	2.2
170°	0.0	0.7	1.5	2.2	2.2	2.2
172.5°	0.0	0.0	0.7	1.5	1.5	2.2
175°	0.0	0.0	0.0	0.7	1.5	2.2
177.5°	0.0	0.0	0.0	0.7	1.5	2.2
180°	0.7	0.7	0.7	0.7	0.7	0.7



TEST NUMBER: P894164
 CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC93-HI-5000K

CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	19.77	21.23	20.22	21.66	22.11	22.03	23.49	22.48	23.92	24.37
	3H	20.59	21.91	21.06	22.35	22.85	23.73	25.04	24.19	25.49	25.99
	4H	20.79	22.04	21.28	22.50	23.01	24.56	25.81	25.05	26.27	26.78
	6H	20.88	22.04	21.38	22.51	23.04	25.44	26.59	25.94	27.07	27.60
	8H	20.89	21.99	21.40	22.48	23.02	25.91	27.01	26.43	27.51	28.05
	12H	20.87	21.93	21.39	22.42	22.98	26.46	27.51	26.97	28.00	28.56
4H	2H	20.20	21.45	20.69	21.91	22.42	22.39	23.63	22.88	24.09	24.61
	3H	21.30	22.34	21.80	22.85	23.38	24.28	25.32	24.78	25.83	26.36
	4H	21.64	22.59	22.16	23.11	23.67	25.25	26.20	25.77	26.71	27.28
	6H	21.83	22.66	22.37	23.21	23.79	26.29	27.12	26.83	27.66	28.25
	8H	21.86	22.64	22.41	23.18	23.78	26.85	27.63	27.40	28.17	28.77
	12H	21.86	22.57	22.43	23.14	23.74	27.51	28.21	28.08	28.78	29.38
8H	4H	21.97	22.75	22.52	23.29	23.89	25.39	26.17	25.94	26.71	27.31
	6H	22.29	22.94	22.87	23.53	24.13	26.56	27.21	27.14	27.80	28.40
	8H	22.38	22.97	22.97	23.57	24.18	27.24	27.83	27.84	28.43	29.04
	12H	22.43	22.96	23.03	23.54	24.23	28.06	28.58	28.65	29.17	29.85
12H	4H	22.05	22.75	22.61	23.32	23.92	25.38	26.08	25.95	26.66	27.26
	6H	22.43	23.02	23.02	23.62	24.23	26.57	27.16	27.17	27.76	28.38
	8H	22.59	23.11	23.18	23.70	24.38	27.31	27.83	27.90	28.42	29.10