

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: P894154

Luminaire Tested: 4MB-SC3-ASML-UNV-CC83-HI-4000K

Issue Date: 11/11/2024

**Test Information**

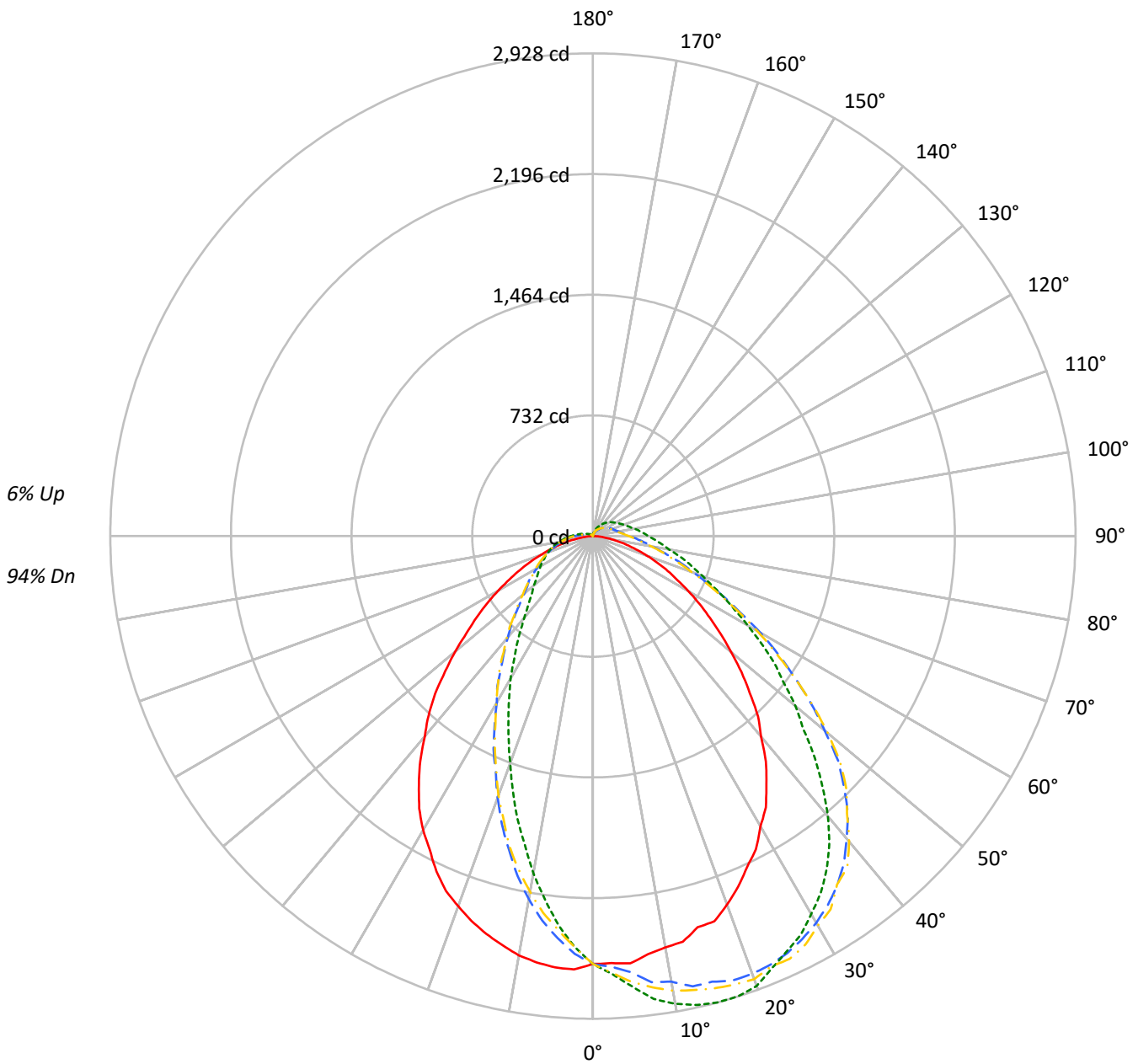
Test Method: LM-79-2019  
Report Number: P894154  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-33)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-SC3-ASML-UNV-CC83-HI-4000K  
Description: Selectable 4FT MICROBAY LINEAR BAY with ASYMMETRIC LENS, 80CRI, 4000K CCT, HI lumen setting  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6468.9 lumens  
Efficiency: N/A  
Efficacy: 127.6 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

TEST NUMBER: P894154  
CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC83-HI-4000K

### 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	85	83	81	79
2	98	90	83	78	95	88	82	76	83	78	74	79	75	71	75	72	69	75	72	69	66
3	90	80	72	65	87	78	70	64	74	68	63	70	65	61	67	63	59	67	63	59	57
4	83	71	63	56	80	69	61	55	66	59	54	63	57	53	60	55	51	60	55	51	49
5	76	64	55	49	74	62	54	48	60	53	47	57	51	46	55	49	45	55	49	45	43
6	71	58	49	43	68	56	48	42	54	47	42	52	46	41	50	44	40	50	44	40	38
7	66	53	44	38	64	51	43	38	49	42	37	48	41	36	46	40	36	46	40	36	34
8	61	48	40	34	59	47	39	34	45	38	33	44	37	33	42	37	32	42	37	32	30
9	57	44	36	31	56	43	36	31	42	35	30	40	34	30	39	33	29	39	33	29	28
10	54	41	33	28	52	40	33	28	39	32	28	38	31	27	36	31	27	36	31	27	25

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	26433	26433	26433	26433
5°	26531	26936	26781	23281
10°	26054	27511	26561	19842
15°	25688	27413	26124	16591
20°	25490	26871	25599	13573
25°	24518	25624	24857	11168
30°	23490	24489	23795	9226
35°	22331	23111	22393	7518
40°	20553	21141	20541	6164
45°	18798	18661	18893	5252
50°	16717	16287	16639	4745
55°	14731	14268	14629	4359
60°	12919	12169	12805	4120
65°	11320	10479	11051	3914
70°	9621	9183	9295	3741
75°	7843	8347	7632	3603
80°	6048	7513	5501	3355
85°	4161	7254	3362	3145

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 157.5°  
 Vertical Angle: 45°  
 Luminance: 26149 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	243.9	3.8
10°-20°	677.8	10.5
20°-30°	975.0	15.1
30°-40°	1106.4	17.1
40°-50°	1057.4	16.3
50°-60°	859.2	13.3
60°-70°	599.5	9.3
70°-80°	371.4	5.7
80°-90°	213.0	3.3
90°-100°	127.3	2.0
100°-110°	83.6	1.3
110°-120°	58.6	0.9
120°-130°	42.4	0.7
130°-140°	28.2	0.4
140°-150°	15.9	0.2
150°-160°	7.1	0.1
160°-170°	2.0	0.0
170°-180°	0.2	0.0
0°-30°	1896.7	29.3
0°-40°	3003.1	46.4
0°-60°	4919.7	76.1
0°-90°	6103.6	94.4
90°-120°	269.5	4.2
90°-150°	356.0	5.5
90°-180°	365.0	5.6
0°-180°	6468.9	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2596	2596	2596	2596	2596	
5°	2602	2743	2627	2371	2602	245
15°	2457	2928	2499	1772	2457	698
25°	2214	2781	2244	1212	2214	1021
35°	1836	2471	1841	804	1836	1144
45°	1346	1905	1353	536	1346	1039
55°	867	1344	861	410	867	780
65°	501	874	490	326	501	498
75°	223	585	217	252	223	240
85°	48	396	39	172	48	54
90°	2	335	0	132	2	4
95°	2	292	0	100	2	2
105°	2	224	0	54	2	2
115°	2	178	0	30	2	2
125°	2	145	0	20	2	2
135°	2	116	0	15	2	1
145°	2	82	0	10	2	1
155°	2	51	0	6	2	1
165°	2	24	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°	2595.5	2595.5	2595.5	2595.5	2595.5	2595.5	2595.5	2595.5	2595.5	2595.5	2595.5
2.5°	2592.9	2612.5	2614.2	2675.4	2657.5	2680.5	2651.6	2656.7	2631.2	2624.4	2536.0
5°	2602.3	2643.9	2655.0	2760.3	2743.3	2755.2	2715.3	2686.4	2626.9	2591.2	2448.4
7.5°	2558.1	2667.7	2728.9	2803.7	2831.7	2841.1	2760.3	2706.8	2608.2	2520.7	2353.3
10°	2533.4	2684.7	2744.2	2856.4	2881.0	2863.2	2800.3	2711.9	2582.7	2441.6	2236.0
12.5°	2519.8	2694.1	2797.7	2912.5	2913.3	2894.6	2820.7	2725.5	2541.1	2356.7	2111.9
15°	2456.9	2692.4	2798.6	2915.0	2927.8	2915.9	2840.2	2716.2	2498.6	2251.3	1969.1
17.5°	2450.1	2688.1	2825.8	2948.2	2926.9	2918.4	2852.1	2711.9	2447.6	2144.2	1834.8
20°	2378.8	2678.8	2825.8	2910.8	2904.0	2907.4	2859.8	2706.0	2389.0	2028.6	1687.8
22.5°	2303.1	2667.7	2813.9	2878.5	2837.7	2899.7	2825.8	2689.8	2329.5	1907.9	1541.6
25°	2213.9	2649.9	2790.9	2832.6	2780.7	2829.2	2828.3	2665.2	2244.5	1777.9	1426.1
27.5°	2141.6	2621.8	2753.5	2816.4	2728.1	2769.7	2793.5	2635.4	2144.2	1649.6	1290.1
30°	2033.7	2586.1	2708.5	2717.9	2648.2	2700.9	2728.1	2598.0	2060.1	1504.3	1166.0
32.5°	1951.3	2545.3	2653.3	2640.5	2570.8	2640.5	2684.7	2560.6	1959.8	1376.8	1078.5
35°	1835.7	2496.0	2584.4	2517.3	2471.4	2529.2	2581.0	2520.7	1840.8	1240.8	966.3
37.5°	1723.5	2452.7	2502.0	2418.7	2355.8	2420.4	2534.3	2445.9	1721.0	1132.9	883.0
40°	1586.7	2353.3	2394.1	2281.0	2218.1	2313.3	2417.9	2381.3	1585.8	1020.7	802.3
42.5°	1483.0	2279.3	2291.2	2136.5	2061.8	2162.9	2281.9	2289.5	1476.2	919.5	730.9
45°	1346.2	2175.6	2153.5	1983.6	1905.4	1996.3	2174.8	2195.2	1353.0	832.0	661.2
47.5°	1222.9	2060.1	2016.7	1817.9	1730.3	1838.2	2036.3	2089.8	1215.3	751.3	595.8
50°	1094.6	1930.9	1834.8	1663.2	1604.5	1658.1	1860.3	1948.7	1089.5	671.4	545.6
52.5°	977.3	1788.1	1669.1	1515.3	1456.7	1500.9	1675.9	1808.5	964.6	604.3	501.4
55°	866.9	1645.3	1491.5	1355.5	1343.6	1357.2	1489.0	1641.1	860.9	544.8	473.4
57.5°	768.3	1472.0	1331.7	1231.4	1210.2	1221.2	1312.2	1468.6	760.6	485.3	432.6
60°	668.8	1294.3	1173.7	1096.3	1084.4	1092.9	1151.6	1300.3	662.9	435.1	394.3
62.5°	578.8	1115.9	1008.8	979.9	971.4	971.4	996.0	1132.0	571.1	384.1	365.4
65°	501.4	962.9	882.2	871.1	873.7	872.8	857.5	945.0	489.5	339.1	339.9
67.5°	423.2	800.6	755.5	769.1	779.3	775.1	742.8	786.1	413.0	298.3	317.0
70°	351.0	661.2	652.7	683.3	707.1	685.0	638.2	642.5	339.1	258.4	287.3
72.5°	283.0	534.6	573.7	616.1	639.1	614.4	549.9	531.2	272.8	221.8	260.1
75°	222.7	430.0	492.1	555.0	584.7	553.3	478.5	414.7	216.7	187.0	238.0
77.5°	170.0	340.8	420.7	493.8	522.7	495.5	416.4	323.8	158.9	157.2	214.2
80°	121.5	269.4	373.1	443.6	470.0	443.6	361.2	255.8	110.5	125.8	188.7
82.5°	79.9	208.2	324.6	403.7	432.6	400.3	313.6	197.2	70.5	102.0	170.0
85°	48.4	164.9	283.0	362.9	396.0	364.6	274.5	149.6	39.1	78.2	147.9
87.5°	21.2	127.5	252.4	334.8	364.6	335.7	244.8	117.3	16.1	61.2	126.6
90°	1.7	101.1	222.7	308.5	334.8	307.6	216.7	95.2	0.0	44.2	108.8
92.5°	1.7	86.7	204.0	285.6	315.3	284.7	195.5	78.2	0.0	32.3	91.8
95°	2.5	73.1	185.3	267.7	291.5	265.2	178.5	67.1	0.0	22.1	77.3
97.5°	2.5	66.3	170.0	249.9	276.2	248.2	163.2	60.3	0.0	16.1	62.9
100°	1.7	61.2	158.1	232.9	257.5	231.2	151.3	54.4	0.0	10.2	51.0
102.5°	1.7	56.9	147.9	218.4	238.0	215.9	141.1	51.0	0.0	8.5	41.6
105°	1.7	54.4	138.5	201.4	224.4	201.4	132.6	47.6	0.0	6.8	32.3
107.5°	1.7	51.0	131.7	192.1	210.8	190.4	125.8	45.0	0.0	6.8	26.3
110°	1.7	48.4	125.8	178.5	199.7	180.2	119.8	40.8	0.0	4.2	21.2



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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°	1.7	44.2	119.8	169.1	189.5	170.0	114.7	37.4	0.0	4.2	18.7
115°	1.7	39.9	114.7	163.2	178.5	161.5	109.6	33.1	0.0	3.4	17.0
117.5°	1.7	37.4	111.3	155.5	170.8	153.8	105.4	31.4	0.0	3.4	16.1
120°	1.7	35.7	106.2	147.9	159.8	146.2	100.3	29.7	0.0	3.4	15.3
122.5°	1.7	34.0	102.0	141.1	153.8	140.2	96.0	28.9	0.0	2.5	13.6
125°	1.7	32.3	96.0	133.4	145.3	131.7	88.4	28.0	0.0	1.7	11.9
127.5°	1.7	30.6	90.1	127.5	138.5	125.8	83.3	27.2	0.0	1.7	11.0
130°	1.7	29.7	82.4	119.8	130.9	118.1	77.3	27.2	0.0	1.7	10.2
132.5°	1.7	28.9	73.9	112.2	124.1	110.5	71.4	26.3	0.0	1.7	8.5
135°	1.7	28.0	65.4	104.5	115.6	102.8	66.3	25.5	0.0	1.7	7.6
137.5°	1.7	26.3	57.8	96.0	107.1	94.3	62.9	23.8	0.0	1.7	6.8
140°	1.7	24.6	51.8	89.2	98.6	86.7	57.8	22.1	0.0	0.8	5.1
142.5°	1.7	22.1	46.7	80.7	90.1	79.0	51.8	18.7	0.0	0.8	5.1
145°	1.7	19.5	42.5	70.5	81.6	70.5	48.4	17.0	0.0	0.8	4.2
147.5°	1.7	17.8	38.2	59.5	73.9	64.6	43.3	14.4	0.0	0.8	3.4
150°	1.7	16.1	33.1	50.1	65.4	56.9	39.9	12.7	0.0	0.0	2.5
152.5°	1.7	14.4	28.9	41.6	58.6	51.8	35.7	11.0	0.0	0.0	1.7
155°	2.5	13.6	24.6	36.5	51.0	45.0	29.7	9.3	0.0	0.0	1.7
157.5°	2.5	11.9	20.4	29.7	45.0	39.1	23.8	7.6	0.0	0.0	0.8
160°	2.5	11.0	17.0	22.9	37.4	32.3	19.5	5.9	0.0	0.0	0.8
162.5°	2.5	10.2	14.4	17.0	30.6	25.5	15.3	4.2	0.0	0.0	0.8
165°	2.5	8.5	12.7	11.9	23.8	19.5	11.9	2.5	0.0	0.0	0.0
167.5°	2.5	7.6	10.2	8.5	17.8	14.4	8.5	1.7	0.0	0.0	0.0
170°	2.5	5.9	8.5	5.9	5.1	9.3	5.1	0.8	0.0	0.0	0.0
172.5°	2.5	5.1	6.8	4.2	1.7	5.1	2.5	0.0	0.0	0.0	0.0
175°	2.5	4.2	4.2	2.5	0.8	1.7	0.0	0.0	0.0	0.0	0.0
177.5°	2.5	3.4	2.5	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2595.5	2595.5	2595.5	2595.5	2595.5	2595.5
2.5°	2524.1	2496.0	2470.5	2497.7	2517.3	2592.9
5°	2400.9	2371.1	2374.5	2399.2	2464.6	2602.3
7.5°	2273.4	2224.1	2236.0	2304.8	2401.7	2558.1
10°	2123.0	2077.9	2089.0	2192.6	2328.6	2533.4
12.5°	1988.7	1913.0	1977.6	2075.4	2243.6	2519.8
15°	1831.4	1772.0	1806.8	1951.3	2162.0	2456.9
17.5°	1661.5	1615.6	1657.2	1800.9	2061.8	2450.1
20°	1530.6	1466.9	1516.2	1674.2	1937.7	2378.8
22.5°	1383.6	1335.1	1387.0	1532.3	1811.1	2303.1
25°	1262.9	1211.9	1263.7	1408.2	1698.9	2213.9
27.5°	1145.6	1098.9	1145.6	1278.2	1587.5	2141.6
30°	1042.8	997.7	1045.3	1172.8	1457.5	2033.7
32.5°	946.7	889.0	950.1	1073.4	1342.8	1951.3
35°	847.3	804.0	849.9	986.7	1215.3	1835.7
37.5°	764.9	719.8	774.2	891.5	1107.4	1723.5
40°	686.7	646.7	690.1	815.0	1015.6	1586.7
42.5°	625.5	585.6	629.7	745.3	922.9	1483.0
45°	566.0	536.3	572.0	668.8	829.5	1346.2
47.5°	522.7	497.2	526.9	612.7	751.3	1222.9
50°	485.3	467.4	488.7	556.7	670.5	1094.6
52.5°	452.1	434.3	458.9	513.3	606.8	977.3
55°	426.6	410.5	429.2	472.5	543.1	866.9
57.5°	398.6	388.4	402.8	429.2	492.9	768.3
60°	378.2	367.1	382.4	403.7	436.0	668.8
62.5°	355.2	349.3	358.6	375.6	392.6	578.8
65°	334.8	326.3	338.2	344.2	342.5	501.4
67.5°	312.7	310.2	317.0	317.8	305.1	423.2
70°	289.8	288.1	296.6	291.5	265.2	351.0
72.5°	271.1	271.1	276.2	266.0	231.2	283.0
75°	250.7	252.4	256.7	244.8	194.6	222.7
77.5°	232.0	233.7	234.6	218.4	163.2	170.0
80°	210.8	209.9	218.4	198.0	132.6	121.5
82.5°	192.1	188.7	193.8	173.4	107.1	79.9
85°	170.8	171.7	175.1	151.3	85.8	48.4
87.5°	153.8	153.8	157.2	133.4	64.6	21.2
90°	133.4	131.7	136.8	113.0	48.4	1.7
92.5°	116.4	116.4	119.8	96.9	35.7	1.7
95°	99.4	100.3	102.8	79.9	27.2	2.5
97.5°	85.0	85.8	89.2	68.0	19.5	2.5
100°	72.2	73.1	74.8	54.4	15.3	1.7
102.5°	60.3	62.9	62.9	45.0	11.9	1.7
105°	51.0	54.4	52.7	36.5	11.0	1.7
107.5°	42.5	45.9	45.9	29.7	11.0	1.7
110°	34.8	39.9	39.1	25.5	8.5	1.7





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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	29.7	34.0	31.4	22.1	8.5	1.7
115°	25.5	29.7	28.0	20.4	7.6	1.7
117.5°	22.9	25.5	25.5	19.5	7.6	1.7
120°	21.2	23.8	22.9	18.7	7.6	1.7
122.5°	19.5	21.2	21.2	17.0	6.8	1.7
125°	18.7	19.5	20.4	15.3	6.8	1.7
127.5°	17.8	19.5	19.5	14.4	5.9	1.7
130°	16.1	17.8	17.8	13.6	5.9	1.7
132.5°	14.4	16.1	16.1	12.7	5.9	1.7
135°	13.6	15.3	15.3	11.9	5.9	1.7
137.5°	12.7	13.6	13.6	11.0	5.9	1.7
140°	11.0	12.7	12.7	10.2	5.9	1.7
142.5°	10.2	11.9	11.9	9.3	5.1	1.7
145°	9.3	10.2	11.0	8.5	5.1	1.7
147.5°	7.6	9.3	10.2	7.6	5.1	1.7
150°	5.9	8.5	8.5	7.6	5.1	1.7
152.5°	4.2	7.6	7.6	6.8	4.2	1.7
155°	3.4	5.9	6.8	5.9	4.2	2.5
157.5°	2.5	5.1	5.9	5.9	4.2	2.5
160°	1.7	4.2	5.1	5.1	3.4	2.5
162.5°	0.8	3.4	4.2	5.1	3.4	2.5
165°	0.0	2.5	3.4	4.2	3.4	2.5
167.5°	0.0	1.7	2.5	3.4	2.5	2.5
170°	0.0	0.8	1.7	2.5	2.5	2.5
172.5°	0.0	0.0	0.8	1.7	1.7	2.5
175°	0.0	0.0	0.0	0.8	1.7	2.5
177.5°	0.0	0.0	0.0	0.8	1.7	2.5
180°	0.8	0.8	0.8	0.8	0.8	0.8



TEST NUMBER: P894154  
 CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC83-HI-4000K

**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	20.30	21.75	20.75	22.19	22.64	22.55	24.01	23.01	24.44	24.90
	3H	21.12	22.43	21.58	22.88	23.37	24.25	25.57	24.72	26.02	26.51
	4H	21.32	22.56	21.81	23.02	23.54	25.09	26.34	25.58	26.80	27.31
	6H	21.41	22.56	21.91	23.04	23.57	25.97	27.12	26.47	27.60	28.12
	8H	21.41	22.51	21.93	23.01	23.55	26.44	27.54	26.95	28.04	28.57
	12H	21.40	22.45	21.92	22.95	23.51	26.98	28.04	27.50	28.53	29.09
4H	2H	20.73	21.97	21.22	22.43	22.95	22.92	24.16	23.41	24.62	25.13
	3H	21.83	22.87	22.33	23.38	23.91	24.80	25.85	25.30	26.35	26.89
	4H	22.17	23.11	22.69	23.63	24.20	25.77	26.72	26.30	27.24	27.81
	6H	22.36	23.19	22.90	23.73	24.32	26.82	27.65	27.36	28.19	28.77
	8H	22.39	23.17	22.93	23.71	24.30	27.38	28.16	27.93	28.70	29.30
	12H	22.39	23.09	22.96	23.67	24.27	28.04	28.74	28.60	29.31	29.91
8H	4H	22.50	23.28	23.04	23.82	24.41	25.92	26.70	26.46	27.24	27.83
	6H	22.82	23.47	23.40	24.06	24.66	27.09	27.74	27.67	28.33	28.93
	8H	22.91	23.49	23.50	24.10	24.71	27.77	28.36	28.36	28.96	29.57
	12H	22.96	23.49	23.56	24.07	24.76	28.58	29.11	29.18	29.69	30.38
12H	4H	22.57	23.28	23.14	23.85	24.45	25.91	26.61	26.48	27.18	27.78
	6H	22.95	23.54	23.55	24.14	24.76	27.10	27.69	27.70	28.29	28.90
	8H	23.11	23.64	23.71	24.22	24.91	27.84	28.36	28.43	28.95	29.63