

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: P893716

Luminaire Tested: 4MB-6SL-ASML-UNV-L850

Issue Date: 11/11/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P893716  
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-6SL-ASML-UNV-L850  
Description: 6000 Lumen 4FT MICROBAY LINEAR BAY with ASYMMETRIC LENS, 80CRI, 5000K CCT  
Light Source: -  
Ballast/Driver: -

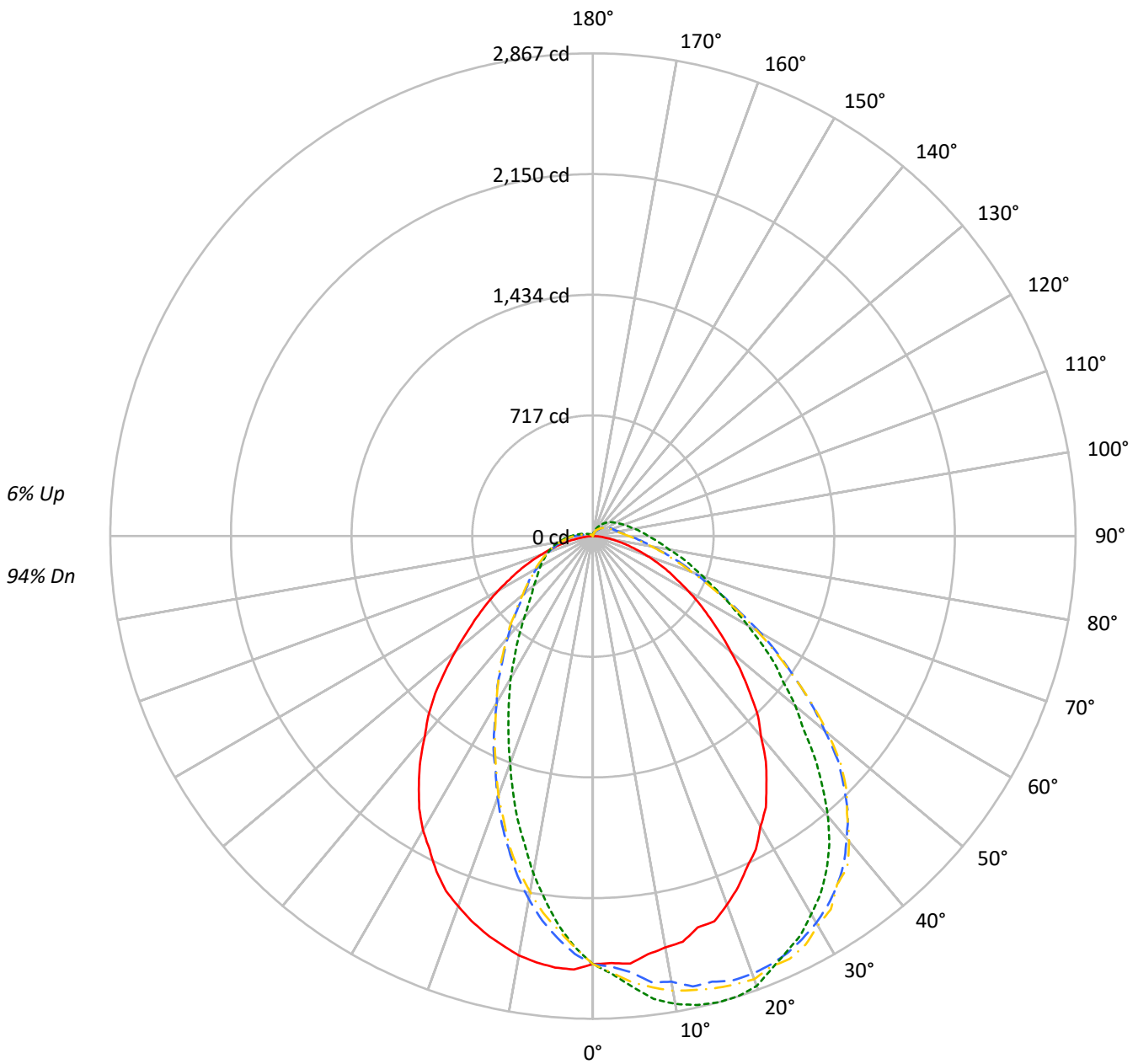
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6335.0 lumens  
Efficiency: N/A  
Efficacy: 142.7 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): 44.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.99  
Total Harmonic Distortion (THDi): 4  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

TEST NUMBER: P893716  
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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	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°	25885	25885	25885	25885
5°	25981	26378	26227	22799
10°	25515	26941	26011	19431
15°	25157	26844	25582	16247
20°	24961	26314	25068	13292
25°	24010	25093	24342	10936
30°	23003	23981	23301	9036
35°	21869	22632	21930	7362
40°	20127	20703	20116	6036
45°	18409	18274	18502	5144
50°	16370	15950	16295	4646
55°	14426	13972	14327	4269
60°	12653	11918	12541	4034
65°	11085	10262	10823	3833
70°	9421	8992	9103	3663
75°	7681	8175	7474	3529
80°	5924	7357	5386	3287
85°	4075	7104	3293	3079

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 157.5°  
 Vertical Angle: 45°  
 Luminance: 25607 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	238.8	3.8
10°-20°	663.8	10.5
20°-30°	954.8	15.1
30°-40°	1083.5	17.1
40°-50°	1035.5	16.3
50°-60°	841.4	13.3
60°-70°	587.1	9.3
70°-80°	363.7	5.7
80°-90°	208.6	3.3
90°-100°	124.7	2.0
100°-110°	81.9	1.3
110°-120°	57.4	0.9
120°-130°	41.6	0.7
130°-140°	27.6	0.4
140°-150°	15.6	0.2
150°-160°	6.9	0.1
160°-170°	2.0	0.0
170°-180°	0.2	0.0
0°-30°	1857.4	29.3
0°-40°	2940.9	46.4
0°-60°	4817.8	76.0
0°-90°	5977.2	94.4
90°-120°	263.9	4.2
90°-150°	348.7	5.5
90°-180°	358.0	5.7
0°-180°	6335.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2542	2542	2542	2542	2542	
5°	2548	2686	2572	2322	2548	240
15°	2406	2867	2447	1735	2406	684
25°	2168	2723	2198	1187	2168	1000
35°	1798	2420	1803	787	1798	1121
45°	1318	1866	1325	525	1318	1017
55°	849	1316	843	402	849	764
65°	491	856	479	320	491	487
75°	218	573	212	247	218	235
85°	47	388	38	168	47	53
90°	2	328	0	129	2	4
95°	2	286	0	98	2	2
105°	2	220	0	53	2	2
115°	2	175	0	29	2	2
125°	2	142	0	19	2	2
135°	2	113	0	15	2	1
145°	2	80	0	10	2	1
155°	2	50	0	6	2	1
165°	2	23	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°	2541.7	2541.7	2541.7	2541.7	2541.7	2541.7	2541.7	2541.7	2541.7	2541.7	2541.7
2.5°	2539.2	2558.4	2560.0	2619.9	2602.5	2624.9	2596.6	2601.6	2576.7	2570.0	2483.5
5°	2548.4	2589.1	2600.0	2703.2	2686.5	2698.2	2659.1	2630.8	2572.5	2537.5	2397.7
7.5°	2505.1	2612.5	2672.4	2745.6	2773.1	2782.2	2703.2	2650.7	2554.2	2468.5	2304.5
10°	2481.0	2629.1	2687.4	2797.2	2821.3	2803.9	2742.3	2655.7	2529.2	2391.1	2189.7
12.5°	2467.6	2638.3	2739.8	2852.1	2853.0	2834.7	2762.3	2669.0	2488.4	2307.8	2068.2
15°	2406.1	2636.6	2740.6	2854.6	2867.1	2855.5	2781.4	2659.9	2446.8	2204.6	1928.3
17.5°	2399.4	2632.4	2767.3	2887.1	2866.3	2858.0	2793.1	2655.7	2396.9	2099.8	1796.8
20°	2329.5	2623.3	2767.3	2850.5	2843.8	2847.1	2800.5	2649.9	2339.5	1986.6	1652.9
22.5°	2255.4	2612.5	2755.6	2818.9	2778.9	2839.7	2767.3	2634.1	2281.2	1868.4	1509.7
25°	2168.0	2595.0	2733.1	2773.9	2723.1	2770.6	2769.7	2610.0	2198.0	1741.1	1396.5
27.5°	2097.3	2567.5	2696.5	2758.1	2671.5	2712.3	2735.6	2580.8	2099.8	1615.4	1263.4
30°	1991.6	2532.6	2652.4	2661.6	2593.3	2644.9	2671.5	2544.2	2017.4	1473.1	1141.9
32.5°	1910.9	2492.6	2598.3	2585.8	2517.6	2585.8	2629.1	2507.6	1919.2	1348.3	1056.1
35°	1797.7	2444.3	2530.9	2465.1	2420.2	2476.8	2527.6	2468.5	1802.7	1215.1	946.3
37.5°	1687.8	2401.9	2450.2	2368.6	2307.0	2370.3	2481.8	2395.2	1685.3	1109.4	864.7
40°	1553.8	2304.5	2344.5	2233.8	2172.2	2265.4	2367.8	2332.0	1553.0	999.5	785.6
42.5°	1452.3	2232.1	2243.8	2092.3	2019.1	2118.1	2234.6	2242.1	1445.6	900.5	715.7
45°	1318.3	2130.6	2108.9	1942.5	1865.9	1955.0	2129.7	2149.7	1325.0	814.8	647.5
47.5°	1197.6	2017.4	1974.9	1780.2	1694.5	1800.2	1994.1	2046.5	1190.1	735.7	583.4
50°	1071.9	1890.9	1796.8	1628.7	1571.3	1623.7	1821.8	1908.4	1067.0	657.5	534.3
52.5°	957.1	1751.1	1634.6	1483.9	1426.5	1469.8	1641.2	1771.0	944.6	591.7	491.0
55°	848.9	1611.2	1460.6	1327.4	1315.8	1329.1	1458.1	1607.1	843.1	533.5	463.6
57.5°	752.4	1441.5	1304.1	1205.9	1185.1	1196.0	1285.0	1438.1	744.9	475.2	423.6
60°	655.0	1267.5	1149.3	1073.6	1062.0	1070.3	1127.7	1273.4	649.2	426.1	386.2
62.5°	566.8	1092.8	987.9	959.6	951.3	951.3	975.4	1108.6	559.3	376.2	357.9
65°	491.0	942.9	863.9	853.1	855.6	854.7	839.7	925.5	479.4	332.1	332.9
67.5°	414.5	784.0	739.9	753.2	763.2	759.0	727.4	769.8	404.5	292.1	310.4
70°	343.7	647.5	639.2	669.1	692.4	670.8	625.0	629.2	332.1	253.0	281.3
72.5°	277.1	523.5	561.8	603.4	625.9	601.7	538.5	520.2	267.2	217.2	254.7
75°	218.1	421.1	481.9	543.5	572.6	541.8	468.6	406.1	212.2	183.1	233.0
77.5°	166.5	333.7	412.0	483.5	511.8	485.2	407.8	317.1	155.6	154.0	209.7
80°	119.0	263.8	365.4	434.4	460.2	434.4	353.7	250.5	108.2	123.2	184.8
82.5°	78.2	203.9	317.9	395.3	423.6	392.0	307.1	193.1	69.1	99.9	166.5
85°	47.4	161.5	277.1	355.4	387.8	357.0	268.8	146.5	38.3	76.6	144.8
87.5°	20.8	124.8	247.2	327.9	357.0	328.7	239.7	114.9	15.8	59.9	124.0
90°	1.7	99.0	218.1	302.1	327.9	301.3	212.2	93.2	0.0	43.3	106.5
92.5°	1.7	84.9	199.7	279.6	308.8	278.8	191.4	76.6	0.0	31.6	89.9
95°	2.5	71.6	181.4	262.2	285.5	259.7	174.8	65.7	0.0	21.6	75.7
97.5°	2.5	64.9	166.5	244.7	270.5	243.0	159.8	59.1	0.0	15.8	61.6
100°	1.7	59.9	154.8	228.0	252.2	226.4	148.1	53.3	0.0	10.0	49.9
102.5°	1.7	55.8	144.8	213.9	233.0	211.4	138.2	49.9	0.0	8.3	40.8
105°	1.7	53.3	135.7	197.2	219.7	197.2	129.8	46.6	0.0	6.7	31.6
107.5°	1.7	49.9	129.0	188.1	206.4	186.4	123.2	44.1	0.0	6.7	25.8
110°	1.7	47.4	123.2	174.8	195.6	176.4	117.3	39.9	0.0	4.2	20.8



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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	43.3	117.3	165.6	185.6	166.5	112.4	36.6	0.0	4.2	18.3
115°	1.7	39.1	112.4	159.8	174.8	158.1	107.4	32.5	0.0	3.3	16.6
117.5°	1.7	36.6	109.0	152.3	167.3	150.6	103.2	30.8	0.0	3.3	15.8
120°	1.7	35.0	104.0	144.8	156.5	143.1	98.2	29.1	0.0	3.3	15.0
122.5°	1.7	33.3	99.9	138.2	150.6	137.3	94.0	28.3	0.0	2.5	13.3
125°	1.7	31.6	94.0	130.7	142.3	129.0	86.6	27.5	0.0	1.7	11.7
127.5°	1.7	30.0	88.2	124.8	135.7	123.2	81.6	26.6	0.0	1.7	10.8
130°	1.7	29.1	80.7	117.3	128.2	115.7	75.7	26.6	0.0	1.7	10.0
132.5°	1.7	28.3	72.4	109.9	121.5	108.2	69.9	25.8	0.0	1.7	8.3
135°	1.7	27.5	64.1	102.4	113.2	100.7	64.9	25.0	0.0	1.7	7.5
137.5°	1.7	25.8	56.6	94.0	104.9	92.4	61.6	23.3	0.0	1.7	6.7
140°	1.7	24.1	50.8	87.4	96.5	84.9	56.6	21.6	0.0	0.8	5.0
142.5°	1.7	21.6	45.8	79.1	88.2	77.4	50.8	18.3	0.0	0.8	5.0
145°	1.7	19.1	41.6	69.1	79.9	69.1	47.4	16.6	0.0	0.8	4.2
147.5°	1.7	17.5	37.5	58.3	72.4	63.3	42.4	14.1	0.0	0.8	3.3
150°	1.7	15.8	32.5	49.1	64.1	55.8	39.1	12.5	0.0	0.0	2.5
152.5°	1.7	14.1	28.3	40.8	57.4	50.8	35.0	10.8	0.0	0.0	1.7
155°	2.5	13.3	24.1	35.8	49.9	44.1	29.1	9.2	0.0	0.0	1.7
157.5°	2.5	11.7	20.0	29.1	44.1	38.3	23.3	7.5	0.0	0.0	0.8
160°	2.5	10.8	16.6	22.5	36.6	31.6	19.1	5.8	0.0	0.0	0.8
162.5°	2.5	10.0	14.1	16.6	30.0	25.0	15.0	4.2	0.0	0.0	0.8
165°	2.5	8.3	12.5	11.7	23.3	19.1	11.7	2.5	0.0	0.0	0.0
167.5°	2.5	7.5	10.0	8.3	17.5	14.1	8.3	1.7	0.0	0.0	0.0
170°	2.5	5.8	8.3	5.8	5.0	9.2	5.0	0.8	0.0	0.0	0.0
172.5°	2.5	5.0	6.7	4.2	1.7	5.0	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	3.3	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°	2541.7	2541.7	2541.7	2541.7	2541.7	2541.7
2.5°	2471.8	2444.3	2419.4	2446.0	2465.1	2539.2
5°	2351.1	2322.0	2325.3	2349.5	2413.5	2548.4
7.5°	2226.3	2178.0	2189.7	2257.1	2352.0	2505.1
10°	2079.0	2034.9	2045.7	2147.2	2280.4	2481.0
12.5°	1947.5	1873.4	1936.7	2032.4	2197.2	2467.6
15°	1793.5	1735.3	1769.4	1910.9	2117.3	2406.1
17.5°	1627.1	1582.1	1622.9	1763.6	2019.1	2399.4
20°	1498.9	1436.5	1484.7	1639.5	1897.5	2329.5
22.5°	1354.9	1307.5	1358.2	1500.6	1773.5	2255.4
25°	1236.7	1186.8	1237.6	1379.0	1663.7	2168.0
27.5°	1121.9	1076.1	1121.9	1251.7	1554.7	2097.3
30°	1021.2	977.1	1023.7	1148.5	1427.3	1991.6
32.5°	927.1	870.5	930.5	1051.1	1315.0	1910.9
35°	829.8	787.3	832.3	966.2	1190.1	1797.7
37.5°	749.0	704.9	758.2	873.0	1084.4	1687.8
40°	672.5	633.3	675.8	798.1	994.5	1553.8
42.5°	612.5	573.4	616.7	729.9	903.8	1452.3
45°	554.3	525.2	560.1	655.0	812.3	1318.3
47.5°	511.8	486.9	516.0	600.1	735.7	1197.6
50°	475.2	457.7	478.5	545.1	656.6	1071.9
52.5°	442.8	425.3	449.4	502.7	594.2	957.1
55°	417.8	402.0	420.3	462.7	531.8	848.9
57.5°	390.3	380.3	394.5	420.3	482.7	752.4
60°	370.4	359.5	374.5	395.3	426.9	655.0
62.5°	347.9	342.1	351.2	367.9	384.5	566.8
65°	327.9	319.6	331.2	337.1	335.4	491.0
67.5°	306.3	303.8	310.4	311.3	298.8	414.5
70°	283.8	282.1	290.5	285.5	259.7	343.7
72.5°	265.5	265.5	270.5	260.5	226.4	277.1
75°	245.5	247.2	251.3	239.7	190.6	218.1
77.5°	227.2	228.9	229.7	213.9	159.8	166.5
80°	206.4	205.6	213.9	193.9	129.8	119.0
82.5°	188.1	184.8	189.8	169.8	104.9	78.2
85°	167.3	168.1	171.4	148.1	84.1	47.4
87.5°	150.6	150.6	154.0	130.7	63.3	20.8
90°	130.7	129.0	134.0	110.7	47.4	1.7
92.5°	114.0	114.0	117.3	94.9	35.0	1.7
95°	97.4	98.2	100.7	78.2	26.6	2.5
97.5°	83.2	84.1	87.4	66.6	19.1	2.5
100°	70.7	71.6	73.2	53.3	15.0	1.7
102.5°	59.1	61.6	61.6	44.1	11.7	1.7
105°	49.9	53.3	51.6	35.8	10.8	1.7
107.5°	41.6	44.9	44.9	29.1	10.8	1.7
110°	34.1	39.1	38.3	25.0	8.3	1.7





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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	29.1	33.3	30.8	21.6	8.3	1.7
115°	25.0	29.1	27.5	20.0	7.5	1.7
117.5°	22.5	25.0	25.0	19.1	7.5	1.7
120°	20.8	23.3	22.5	18.3	7.5	1.7
122.5°	19.1	20.8	20.8	16.6	6.7	1.7
125°	18.3	19.1	20.0	15.0	6.7	1.7
127.5°	17.5	19.1	19.1	14.1	5.8	1.7
130°	15.8	17.5	17.5	13.3	5.8	1.7
132.5°	14.1	15.8	15.8	12.5	5.8	1.7
135°	13.3	15.0	15.0	11.7	5.8	1.7
137.5°	12.5	13.3	13.3	10.8	5.8	1.7
140°	10.8	12.5	12.5	10.0	5.8	1.7
142.5°	10.0	11.7	11.7	9.2	5.0	1.7
145°	9.2	10.0	10.8	8.3	5.0	1.7
147.5°	7.5	9.2	10.0	7.5	5.0	1.7
150°	5.8	8.3	8.3	7.5	5.0	1.7
152.5°	4.2	7.5	7.5	6.7	4.2	1.7
155°	3.3	5.8	6.7	5.8	4.2	2.5
157.5°	2.5	5.0	5.8	5.8	4.2	2.5
160°	1.7	4.2	5.0	5.0	3.3	2.5
162.5°	0.8	3.3	4.2	5.0	3.3	2.5
165°	0.0	2.5	3.3	4.2	3.3	2.5
167.5°	0.0	1.7	2.5	3.3	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: P893716  
 CATALOG NUMBER: 4MB-6SL-ASML-UNV-L850

**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	20.22	21.68	20.68	22.11	22.57	22.48	23.94	22.93	24.37	24.83
	3H	21.04	22.36	21.51	22.80	23.30	24.18	25.50	24.65	25.94	26.44
	4H	21.25	22.49	21.74	22.95	23.46	25.02	26.26	25.51	26.72	27.24
	6H	21.34	22.49	21.84	22.97	23.49	25.90	27.05	26.40	27.52	28.05
	8H	21.34	22.44	21.85	22.94	23.47	26.37	27.47	26.88	27.97	28.50
	12H	21.33	22.38	21.85	22.87	23.44	26.91	27.96	27.43	28.45	29.02
4H	2H	20.66	21.90	21.15	22.36	22.87	22.85	24.09	23.34	24.55	25.06
	3H	21.76	22.80	22.26	23.31	23.84	24.73	25.77	25.23	26.28	26.81
	4H	22.09	23.04	22.62	23.56	24.13	25.70	26.65	26.22	27.17	27.74
	6H	22.29	23.12	22.83	23.66	24.24	26.74	27.57	27.29	28.12	28.70
	8H	22.31	23.09	22.86	23.64	24.23	27.31	28.09	27.85	28.63	29.22
	12H	22.32	23.02	22.89	23.60	24.20	27.96	28.67	28.53	29.24	29.84
8H	4H	22.42	23.20	22.97	23.75	24.34	25.84	26.62	26.39	27.17	27.76
	6H	22.74	23.40	23.33	23.99	24.59	27.02	27.67	27.60	28.26	28.86
	8H	22.83	23.42	23.43	24.02	24.64	27.69	28.28	28.29	28.88	29.50
	12H	22.89	23.41	23.48	24.00	24.68	28.51	29.03	29.10	29.62	30.30
12H	4H	22.50	23.20	23.07	23.78	24.38	25.84	26.54	26.40	27.11	27.71
	6H	22.88	23.47	23.48	24.07	24.69	27.03	27.62	27.62	28.22	28.83
	8H	23.04	23.56	23.63	24.15	24.83	27.76	28.29	28.36	28.87	29.56