

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: P893668

Luminaire Tested: 4MB-5SL-RND-UNV-L850

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893668
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2403-327-1)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-5SL-RND-UNV-L850
Description: 5000 Lumen 4FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 80CRI, 5000K CCT
Light Source: -
Ballast/Driver: -

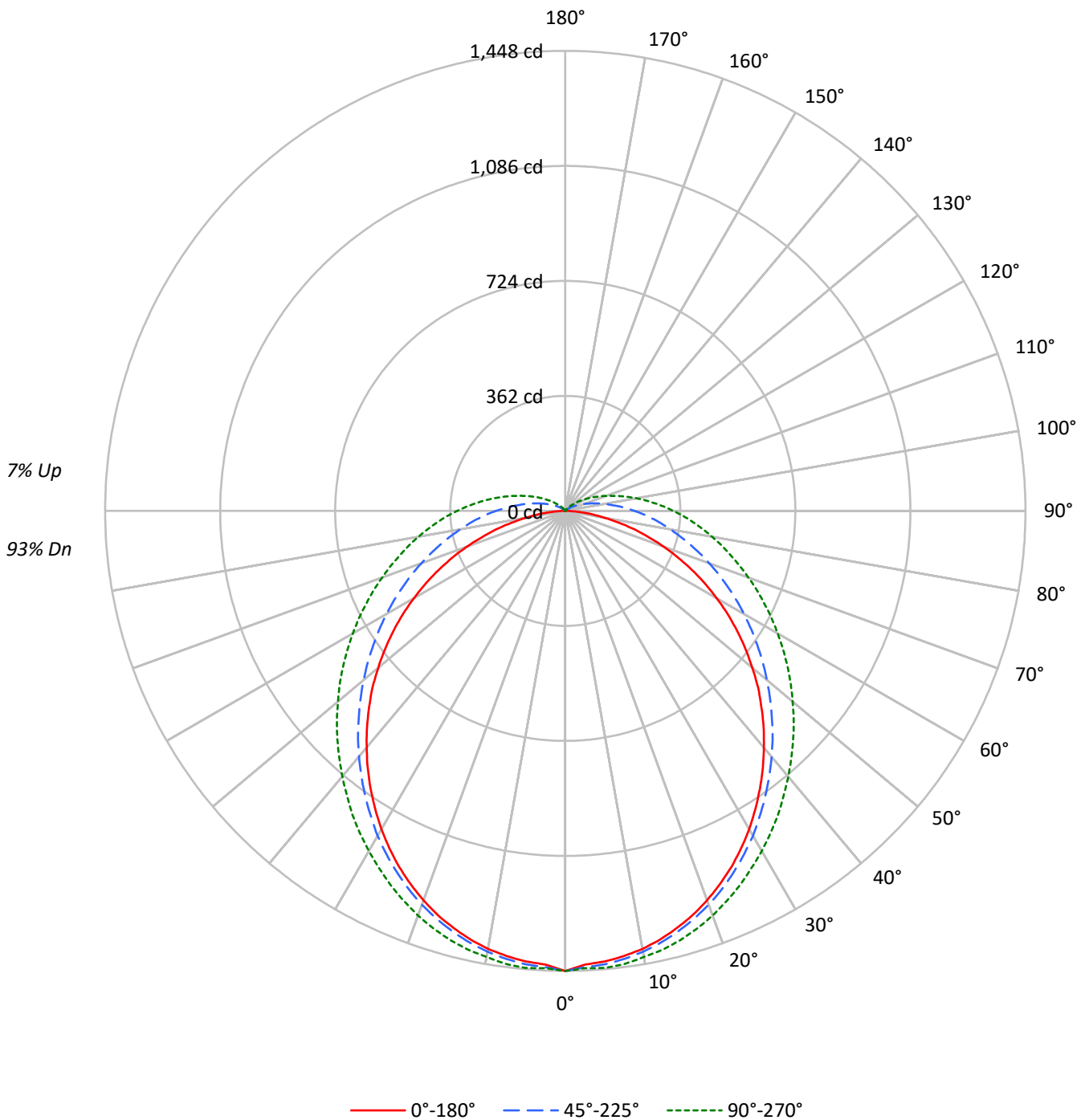
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4795.0 lumens
Efficiency: N/A
Efficacy: 137.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.35
Luminous Opening: Rectangular (W 0.38' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.995
Total Harmonic Distortion (THDi): 9.55
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P893668
CATALOG NUMBER: 4MB-5SL-RND-UNV-L850

Luminous Intensity Polar Plot





TEST NUMBER: P893668
 CATALOG NUMBER: 4MB-5SL-RND-UNV-L850

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.0	2.9
10°-20°	390.3	8.1
20°-30°	584.4	12.2
30°-40°	696.8	14.5
40°-50°	722.7	15.1
50°-60°	670.5	14.0
60°-70°	559.3	11.7
70°-80°	417.0	8.7
80°-90°	277.7	5.8
90°-100°	169.0	3.5
100°-110°	94.4	2.0
110°-120°	47.1	1.0
120°-130°	19.7	0.4
130°-140°	6.2	0.1
140°-150°	1.5	0.0
150°-160°	0.7	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	1111.7	23.2
0°-40°	1808.5	37.7
0°-60°	3201.7	66.8
0°-90°	4455.7	92.9
90°-120°	310.6	6.5
90°-150°	338.0	7.0
90°-180°	339.0	7.1
0°-180°	4795.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1448	1448	1448	1448	1448	
5°	1424	1456	1433	1440	1444	135
15°	1359	1394	1370	1395	1399	383
25°	1236	1269	1255	1290	1300	569
35°	1068	1096	1097	1152	1167	668
45°	873	895	919	992	1014	673
55°	661	683	738	824	853	591
65°	440	475	563	658	691	435
75°	226	288	406	504	538	238
85°	52	143	274	368	404	59
90°	2	94	218	307	340	4
95°	0	58	168	252	281	0
105°	0	18	92	155	179	0
115°	1	4	43	87	104	1
125°	1	1	17	42	52	1
135°	1	1	4	15	19	1
145°	1	1	1	3	4	1
155°	2	2	1	1	1	1
165°	2	2	1	1	1	1
175°	2	2	2	1	0	0
180°	2	2	2	2	2	



TEST NUMBER: P893668

CATALOG NUMBER: 4MB-5SL-RND-UNV-L850

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1448.4	1448.4	1448.4	1448.4	1448.4	1448.4	1448.4	1448.4	1448.4	1448.4	1448.4
2.5°	1429.2	1431.4	1451.8	1450.7	1447.3	1460.9	1464.3	1453.0	1434.8	1453.0	1437.1
5°	1423.5	1425.8	1446.2	1445.0	1441.6	1456.4	1457.5	1447.3	1429.2	1447.3	1432.6
7.5°	1413.3	1415.6	1436.0	1434.8	1432.6	1447.3	1446.2	1438.2	1419.0	1438.2	1422.4
10°	1399.7	1400.8	1422.4	1420.1	1419.0	1433.7	1430.3	1423.5	1404.2	1423.5	1408.8
12.5°	1381.6	1382.7	1404.2	1402.0	1402.0	1415.6	1411.0	1405.4	1386.1	1404.2	1391.8
15°	1358.9	1360.0	1380.4	1379.3	1379.3	1394.0	1387.2	1382.7	1364.6	1383.8	1370.2
17.5°	1334.0	1332.8	1354.4	1352.1	1354.4	1368.0	1358.9	1356.6	1339.6	1357.8	1346.4
20°	1304.5	1304.5	1323.8	1322.6	1326.0	1338.5	1327.2	1328.3	1311.3	1330.6	1319.2
22.5°	1271.6	1270.5	1289.8	1289.8	1293.2	1305.6	1293.2	1296.6	1279.6	1297.7	1288.6
25°	1236.5	1234.2	1253.5	1253.5	1259.2	1269.4	1255.8	1260.3	1244.4	1262.6	1254.6
27.5°	1198.0	1194.6	1213.8	1215.0	1219.5	1229.7	1215.0	1221.8	1207.0	1224.0	1218.4
30°	1157.2	1153.8	1173.0	1174.2	1179.8	1187.8	1173.0	1182.1	1168.5	1185.5	1181.0
32.5°	1113.0	1110.7	1128.8	1131.1	1136.8	1142.4	1128.8	1137.9	1126.6	1143.6	1139.0
35°	1067.6	1065.4	1082.4	1085.8	1091.4	1096.0	1081.2	1093.7	1083.5	1099.4	1097.1
37.5°	1021.2	1017.8	1035.9	1038.2	1045.0	1047.2	1033.6	1048.4	1039.3	1055.2	1054.0
40°	972.4	969.0	987.2	989.4	996.2	996.2	984.9	1000.8	994.0	1008.7	1009.8
42.5°	923.7	920.3	936.2	940.7	946.4	946.4	935.0	952.0	947.5	962.2	965.6
45°	872.7	869.3	884.0	888.6	895.4	895.4	884.0	903.3	899.9	914.6	919.2
47.5°	822.8	818.3	831.9	836.4	843.2	842.1	833.0	852.3	851.2	865.9	873.8
50°	768.4	765.0	778.6	783.2	791.1	788.8	782.0	802.4	802.4	817.2	828.5
52.5°	715.2	711.8	725.4	729.9	736.7	736.7	729.9	751.4	754.8	769.6	783.2
55°	660.8	656.2	669.8	674.4	682.3	683.4	677.8	699.3	706.1	723.1	737.8
57.5°	606.4	604.1	615.4	620.0	630.2	630.2	626.8	649.4	658.5	676.6	693.6
60°	550.8	548.6	558.8	564.4	575.8	578.0	575.8	599.6	612.0	630.2	649.4
62.5°	495.3	493.0	503.2	511.1	523.6	525.9	527.0	552.0	565.6	584.8	606.4
65°	439.7	437.5	447.7	456.7	471.5	474.9	478.3	504.3	520.2	540.6	563.3
67.5°	384.2	383.1	393.3	404.6	420.5	425.0	430.7	457.9	476.0	497.5	522.5
70°	329.8	328.7	338.9	352.5	371.7	377.4	384.2	411.4	434.1	456.7	481.7
72.5°	275.4	276.5	287.9	303.7	325.3	330.9	340.0	368.3	393.3	417.1	443.1
75°	225.5	225.5	238.0	256.1	279.9	287.9	298.1	327.5	353.6	378.5	405.7
77.5°	174.5	174.5	189.3	211.9	238.0	245.9	258.4	289.0	317.3	342.3	369.5
80°	128.1	130.3	147.3	170.0	197.2	207.4	222.1	252.7	283.3	308.3	335.5
82.5°	87.3	90.7	108.8	134.9	162.1	172.3	187.0	219.9	250.5	276.5	304.9
85°	52.1	57.8	77.1	103.1	131.5	142.8	158.7	189.3	219.9	245.9	274.3
87.5°	23.8	31.7	52.1	78.2	105.4	117.9	131.5	160.9	191.5	217.6	247.1
90°	2.3	13.6	34.0	56.7	82.7	94.1	107.7	136.0	165.5	189.3	217.6
92.5°	0.0	5.7	20.4	40.8	63.5	74.8	87.3	114.5	140.5	164.3	191.5
95°	0.0	2.3	11.3	28.3	47.6	57.8	69.1	94.1	120.1	142.8	167.7
97.5°	0.0	1.1	6.8	19.3	35.1	44.2	54.4	77.1	100.9	122.4	145.1
100°	0.0	1.1	3.4	12.5	26.1	32.9	43.1	62.3	83.9	103.1	125.8
102.5°	0.0	0.0	2.3	7.9	19.3	24.9	32.9	49.9	69.1	87.3	107.7
105°	0.0	0.0	1.1	5.7	13.6	18.1	24.9	39.7	56.7	72.5	91.8
107.5°	0.0	0.0	1.1	3.4	9.1	13.6	19.3	30.6	45.3	60.1	77.1
110°	1.1	1.1	1.1	2.3	6.8	10.2	13.6	23.8	37.4	49.9	64.6



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CATALOG NUMBER: 4MB-5SL-RND-UNV-L850

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	1.1	1.1	1.1	1.1	4.5	6.8	10.2	18.1	29.5	39.7	53.3
115°	1.1	1.1	1.1	1.1	3.4	4.5	6.8	13.6	22.7	31.7	43.1
117.5°	1.1	1.1	1.1	1.1	2.3	3.4	4.5	10.2	17.0	24.9	35.1
120°	1.1	1.1	1.1	1.1	1.1	2.3	3.4	6.8	13.6	19.3	28.3
122.5°	1.1	1.1	1.1	1.1	1.1	2.3	2.3	5.7	10.2	14.7	21.5
125°	1.1	1.1	1.1	1.1	1.1	1.1	2.3	3.4	6.8	11.3	17.0
127.5°	1.1	1.1	1.1	1.1	1.1	1.1	2.3	3.4	4.5	7.9	12.5
130°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.3	3.4	5.7	9.1
132.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.3	3.4	4.5	6.8
135°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.3	3.4	4.5
137.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.3	2.3	3.4
140°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.3	2.3
142.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.3
145°	1.1	2.3	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
147.5°	1.1	2.3	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
150°	1.1	2.3	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
152.5°	2.3	2.3	2.3	2.3	2.3	1.1	1.1	1.1	1.1	1.1	1.1
155°	2.3	2.3	2.3	2.3	2.3	2.3	1.1	1.1	1.1	1.1	1.1
157.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	1.1	1.1	1.1
160°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	1.1	1.1	1.1
162.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	1.1	1.1	1.1
165°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	1.1	1.1
167.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	1.1
170°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
172.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	1.1
175°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
177.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
180°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3



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CATALOG NUMBER: 4MB-5SL-RND-UNV-L850

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	1448.4	1448.4	1448.4	1448.4	1448.4	1448.4	1448.4	1448.4	1448.4	1448.4
2.5°	1441.6	1445.0	1448.4	1439.4	1445.0	1455.2	1458.6	1445.0	1449.6	1440.5
5°	1437.1	1439.4	1443.9	1432.6	1440.5	1449.6	1455.2	1443.9	1450.7	1443.9
7.5°	1428.0	1430.3	1436.0	1424.6	1434.8	1442.8	1449.6	1438.2	1445.0	1438.2
10°	1414.4	1417.8	1425.8	1412.2	1424.6	1431.4	1438.2	1425.8	1432.6	1425.8
12.5°	1397.4	1403.1	1409.9	1397.4	1409.9	1415.6	1424.6	1412.2	1420.1	1414.4
15°	1377.0	1382.7	1391.8	1379.3	1395.2	1399.7	1408.8	1396.3	1404.2	1398.6
17.5°	1353.2	1360.0	1371.4	1356.6	1374.8	1378.2	1387.2	1375.9	1383.8	1378.2
20°	1326.0	1332.8	1344.2	1330.6	1348.7	1351.0	1361.2	1351.0	1358.9	1355.5
22.5°	1294.3	1302.2	1313.6	1301.1	1320.4	1320.4	1332.8	1322.6	1331.7	1328.3
25°	1261.4	1270.5	1283.0	1269.4	1289.8	1289.8	1303.4	1293.2	1302.2	1300.0
27.5°	1226.3	1236.5	1251.2	1237.6	1258.0	1256.9	1270.5	1261.4	1271.6	1268.2
30°	1188.9	1200.2	1215.0	1203.6	1225.2	1222.9	1236.5	1228.6	1237.6	1236.5
32.5°	1148.1	1160.6	1178.7	1166.2	1187.8	1185.5	1202.5	1193.4	1204.8	1202.5
35°	1107.3	1120.9	1139.0	1127.7	1151.5	1148.1	1165.1	1157.2	1168.5	1167.4
37.5°	1065.4	1080.1	1098.2	1089.2	1111.8	1108.4	1126.6	1119.8	1132.2	1128.8
40°	1022.3	1037.0	1056.3	1048.4	1072.2	1067.6	1086.9	1081.2	1093.7	1091.4
42.5°	979.2	995.1	1014.4	1009.8	1032.5	1028.0	1047.2	1042.7	1055.2	1052.9
45°	935.0	952.0	972.4	967.9	991.7	987.2	1006.4	1003.0	1015.5	1014.4
47.5°	890.8	909.0	929.4	927.1	949.8	945.2	965.6	962.2	974.7	974.7
50°	845.5	865.9	886.3	885.2	907.8	903.3	921.4	921.4	935.0	933.9
52.5°	800.2	821.7	843.2	843.2	865.9	861.4	881.8	880.6	894.2	894.2
55°	757.1	776.4	797.9	802.4	824.0	817.2	838.7	841.0	852.3	853.4
57.5°	714.0	734.4	756.0	761.6	782.0	777.5	797.9	800.2	811.5	812.6
60°	671.0	690.2	711.8	719.7	740.1	735.6	756.0	758.2	770.7	771.8
62.5°	627.9	647.2	671.0	678.9	698.2	694.8	716.3	718.6	729.9	732.2
65°	586.0	606.4	629.0	640.4	658.5	654.0	675.5	677.8	690.2	691.4
67.5°	545.1	565.6	588.2	600.7	617.7	615.4	635.8	640.4	650.6	652.8
70°	505.5	525.9	549.7	562.2	579.2	578.0	597.3	600.7	612.0	613.2
72.5°	466.9	487.3	511.1	525.9	540.6	539.5	558.8	563.3	574.6	575.8
75°	429.5	451.1	473.7	489.6	504.3	503.2	522.5	527.0	537.2	538.3
77.5°	394.4	415.9	439.7	455.6	468.1	469.2	486.2	490.7	500.9	504.3
80°	361.5	381.9	404.6	421.6	432.9	435.2	451.1	456.7	464.7	469.2
82.5°	329.8	350.2	372.9	388.7	400.1	402.3	417.1	423.9	431.8	435.2
85°	299.2	319.6	341.1	358.1	368.3	369.5	384.2	391.0	397.8	403.5
87.5°	269.7	290.1	310.5	328.7	337.7	340.0	353.6	360.4	366.1	371.7
90°	240.3	260.7	281.1	298.1	307.1	308.3	323.0	329.8	335.5	340.0
92.5°	213.1	233.5	253.9	270.9	278.8	281.1	293.5	301.5	306.0	310.5
95°	187.0	207.4	225.5	243.7	251.6	255.0	266.3	273.1	278.8	281.1
97.5°	164.3	182.5	199.5	217.6	224.4	227.8	239.1	247.1	251.6	253.9
100°	142.8	159.8	175.7	192.7	199.5	202.9	213.1	219.9	224.4	227.8
102.5°	123.5	139.4	154.1	170.0	176.8	179.1	188.1	194.9	199.5	202.9
105°	106.5	121.3	134.9	149.6	155.3	158.7	166.6	172.3	176.8	179.1
107.5°	90.7	105.4	116.7	130.3	136.0	138.3	146.2	153.0	156.4	157.5
110°	77.1	89.5	100.9	112.2	119.0	121.3	128.1	133.7	137.1	138.3



TEST NUMBER: P893668

CATALOG NUMBER: 4MB-5SL-RND-UNV-L850

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	64.6	75.9	86.1	96.3	102.0	104.3	111.1	116.7	119.0	120.1
115°	53.3	64.6	72.5	82.7	87.3	89.5	95.2	100.9	102.0	104.3
117.5°	43.1	53.3	61.2	69.1	73.7	75.9	80.5	85.0	87.3	88.4
120°	35.1	43.1	49.9	57.8	61.2	63.5	68.0	72.5	73.7	74.8
122.5°	28.3	35.1	40.8	47.6	51.0	53.3	56.7	60.1	61.2	62.3
125°	21.5	28.3	32.9	38.5	41.9	43.1	46.5	49.9	51.0	52.1
127.5°	17.0	21.5	26.1	30.6	32.9	34.0	37.4	39.7	40.8	41.9
130°	12.5	15.9	19.3	23.8	26.1	27.2	29.5	31.7	32.9	32.9
132.5°	9.1	12.5	14.7	18.1	19.3	20.4	22.7	24.9	24.9	26.1
135°	5.7	7.9	10.2	12.5	14.7	14.7	17.0	18.1	19.3	19.3
137.5°	4.5	5.7	6.8	9.1	10.2	11.3	11.3	13.6	13.6	13.6
140°	3.4	4.5	4.5	5.7	6.8	7.9	7.9	9.1	9.1	9.1
142.5°	2.3	3.4	3.4	4.5	4.5	5.7	5.7	5.7	6.8	6.8
145°	2.3	2.3	2.3	3.4	3.4	3.4	3.4	4.5	4.5	4.5
147.5°	1.1	1.1	2.3	2.3	2.3	2.3	2.3	3.4	3.4	3.4
150°	1.1	1.1	1.1	1.1	1.1	2.3	2.3	2.3	2.3	2.3
152.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
155°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
157.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
160°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
162.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
165°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
167.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
170°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
172.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
175°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.0
177.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.0
180°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3



TEST NUMBER: P893668
 CATALOG NUMBER: 4MB-5SL-RND-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	18.39	19.93	18.86	20.39	20.87	19.96	21.50	20.43	21.96	22.44
	3H	20.07	21.47	20.55	21.94	22.47	22.59	23.99	23.07	24.46	24.99
	4H	20.67	22.00	21.17	22.48	23.02	23.90	25.23	24.40	25.72	26.26
	6H	21.07	22.30	21.58	22.80	23.36	25.31	26.54	25.82	27.04	27.60
	8H	21.18	22.37	21.71	22.89	23.45	26.05	27.24	26.58	27.76	28.33
	12H	21.26	22.40	21.79	22.91	23.51	26.90	28.04	27.44	28.56	29.15
4H	2H	19.32	20.65	19.82	21.14	21.68	20.52	21.85	21.02	22.33	22.87
	3H	21.30	22.44	21.82	22.96	23.53	23.43	24.57	23.95	25.09	25.66
	4H	22.07	23.12	22.61	23.65	24.25	24.96	26.00	25.49	26.53	27.13
	6H	22.66	23.58	23.21	24.14	24.75	26.60	27.52	27.15	28.08	28.69
	8H	22.84	23.70	23.40	24.27	24.89	27.48	28.35	28.04	28.91	29.53
	12H	22.96	23.75	23.54	24.34	24.97	28.48	29.27	29.07	29.86	30.49
8H	4H	22.95	23.82	23.52	24.38	25.01	25.32	26.18	25.88	26.75	27.37
	6H	23.83	24.57	24.43	25.18	25.81	27.22	27.95	27.81	28.56	29.19
	8H	24.18	24.85	24.79	25.47	26.11	28.30	28.97	28.91	29.58	30.22
	12H	24.45	25.05	25.06	25.65	26.36	29.57	30.16	30.17	30.77	31.47
12H	4H	23.23	24.02	23.81	24.61	25.24	25.36	26.15	25.94	26.74	27.37
	6H	24.28	24.95	24.89	25.57	26.21	27.33	27.99	27.93	28.61	29.25
	8H	24.80	25.40	25.41	26.00	26.71	28.52	29.12	29.13	29.72	30.43