

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P201243

Luminaire Tested: **4LBLED-LD4-6-SYMF-UNV-L840-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P201243
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P28138)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4LBLED-LD4-6-SYMF-UNV-L840-CD1-U
Description: 4 ft. Low Bay Linear, 6000 lm, Frst Sym lens, 4K
Light Source: (392) 4000K CCT, 80 CRI LEDS
2UT217098A8404C
Ballast/Driver: OSRAM
(OTI50W0960CC)

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6448.6 lumens
Efficiency: N/A
Efficacy: 150.7 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.99 / 1.87
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.21')
CIE Type: Semi-Direct

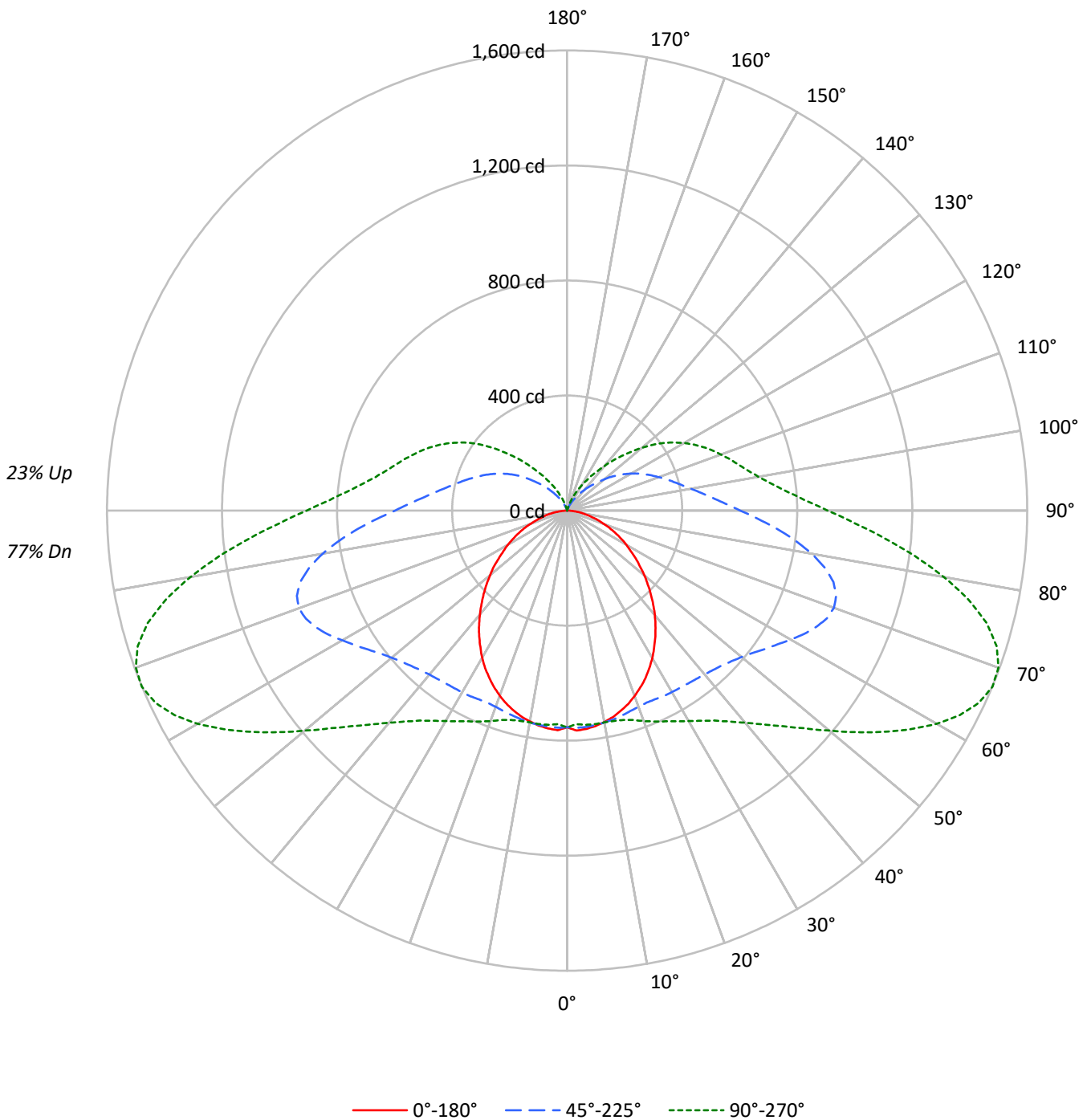
Input Watts (W): 42.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	0
RCR																		
0	114	114	114	114	108	108	108	108	98	98	98	89	89	89	81	81	81	77
1	98	91	84	78	92	86	80	75	77	73	68	69	65	62	62	59	56	52
2	86	75	66	59	81	71	63	56	64	57	51	57	51	47	50	46	42	38
3	77	64	54	46	72	61	51	44	54	46	40	48	42	37	43	37	33	29
4	70	55	45	37	65	52	43	36	47	39	32	42	35	30	37	31	27	23
5	63	49	38	31	59	46	37	29	41	33	27	37	30	25	32	27	22	19
6	58	43	33	26	55	41	32	25	37	29	23	33	26	21	29	23	19	16
7	54	39	29	22	50	37	28	21	33	25	20	30	23	18	26	21	16	14
8	50	35	26	19	47	33	25	19	30	22	17	27	20	16	24	18	14	12
9	46	32	23	17	44	30	22	16	27	20	15	25	18	14	22	17	13	10
10	43	29	21	15	41	28	20	15	25	18	14	23	17	12	20	15	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	12140	12140	12140
5°	12271	10909	12246
10°	12100	10034	12073
15°	11854	9423	11836
20°	11545	9187	11526
25°	11177	9096	11129
30°	10692	9144	10681
35°	10143	9366	10122
40°	9558	9900	9513
45°	8918	10757	8894
50°	8271	12011	8245
55°	7618	13562	7602
60°	7025	15139	7042
65°	6367	16411	6387
70°	5664	17004	5664
75°	4823	16638	4797
80°	3884	15311	3848
85°	2667	13447	2540



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.5	1.1
10°-20°	208.1	3.2
20°-30°	334.4	5.2
30°-40°	452.8	7.0
40°-50°	581.7	9.0
50°-60°	748.4	11.6
60°-70°	915.5	14.2
70°-80°	925.6	14.4
80°-90°	715.8	11.1
90°-100°	497.3	7.7
100°-110°	371.4	5.8
110°-120°	278.4	4.3
120°-130°	187.5	2.9
130°-140°	102.8	1.6
140°-150°	43.8	0.7
150°-160°	12.5	0.2
160°-170°	1.1	0.0
170°-180°	0.0	0.0
0°-30°	614.0	9.5
0°-40°	1066.8	16.5
0°-60°	2396.8	37.2
0°-90°	4953.8	76.8
90°-120°	1147.1	17.8
90°-150°	1481.2	23.0
90°-180°	1495.0	23.2
0°-180°	6448.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	753	753	753	753	753	
5°	762	755	748	754	760	72
15°	720	738	753	738	719	203
25°	644	724	809	724	641	296
35°	534	734	891	734	533	334
45°	412	762	1060	765	411	318
55°	291	839	1341	843	291	261
65°	186	956	1580	962	186	184
75°	92	958	1510	961	92	99
85°	23	733	1108	730	22	25
90°	0	602	905	598	0	1
95°	0	508	765	505	0	0
105°	0	384	617	384	0	1
115°	0	298	522	298	0	0
125°	0	214	410	213	0	1
135°	1	129	269	128	0	1
145°	1	66	148	63	0	1
155°	1	21	61	20	0	1
165°	1	1	6	3	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	753.4	753.4	753.4	753.4	753.4	753.4	753.4	753.4	753.4	753.4	753.4
2.5°	765.4	764.9	761.6	756.7	754.5	753.9	753.4	751.2	750.6	751.7	756.1
5°	762.1	761.6	758.3	753.4	751.7	751.2	750.6	749.0	749.0	750.6	755.0
7.5°	755.6	755.0	751.7	747.9	746.3	745.7	745.7	744.6	744.6	747.4	752.3
10°	746.3	745.7	743.0	739.7	738.6	738.6	738.6	738.1	739.1	742.4	747.9
12.5°	735.3	734.2	732.0	729.3	729.3	729.3	729.8	729.8	731.5	737.0	743.5
15°	720.5	721.1	718.9	716.7	717.8	718.3	719.4	720.5	723.3	729.8	737.5
17.5°	705.2	705.2	703.6	702.5	704.7	705.8	707.4	709.0	714.0	722.2	730.9
20°	686.0	686.6	686.0	686.6	689.3	691.0	693.2	697.0	703.6	715.1	725.5
22.5°	665.2	666.3	666.3	668.5	672.9	675.6	678.4	683.9	693.2	707.9	722.7
25°	643.9	643.3	646.1	649.9	654.3	658.1	661.4	669.6	683.3	703.0	723.8
27.5°	618.1	619.2	623.1	628.6	635.1	640.0	645.0	656.5	676.2	702.5	726.6
30°	591.9	593.5	598.4	606.1	615.4	622.0	627.5	645.5	672.4	702.5	728.7
32.5°	563.4	566.1	572.7	582.6	595.7	603.4	612.1	636.2	669.1	701.4	730.9
35°	534.4	537.7	546.4	558.5	573.8	583.1	596.8	629.1	664.7	700.3	733.7
37.5°	504.8	508.6	518.5	533.8	553.5	567.8	584.2	621.4	661.4	700.3	737.5
40°	474.2	478.5	491.1	508.6	533.8	552.4	572.2	613.8	658.1	700.8	743.5
42.5°	442.9	447.9	463.2	484.0	516.9	538.8	560.7	607.2	655.9	703.6	751.2
45°	411.7	418.3	435.3	460.5	501.5	524.5	549.7	601.2	654.8	708.5	761.6
47.5°	380.5	388.2	407.9	438.0	485.6	513.0	539.3	596.2	655.9	715.1	775.3
50°	350.4	359.2	381.1	417.8	470.9	500.4	529.5	593.0	658.1	724.9	791.7
52.5°	319.8	331.2	355.3	399.7	457.7	488.9	521.2	590.8	662.5	738.1	813.1
55°	291.3	303.3	331.2	382.2	445.1	479.1	513.6	590.2	670.2	753.9	839.3
57.5°	262.3	277.0	307.7	365.2	432.0	469.2	507.5	591.3	679.5	770.9	866.2
60°	237.6	250.8	286.4	348.8	420.5	459.9	502.1	592.4	689.3	790.6	897.4
62.5°	211.3	225.6	267.7	332.9	409.0	451.7	496.6	594.1	699.7	810.9	929.1
65°	185.6	200.4	249.1	317.6	397.5	442.9	490.0	594.1	707.9	829.5	956.5
67.5°	161.0	176.8	230.5	301.1	384.4	432.0	481.8	591.3	712.9	842.6	977.9
70°	137.4	154.9	212.4	283.6	370.1	418.9	470.3	585.3	712.3	847.6	987.2
72.5°	113.9	134.1	192.7	266.1	354.8	404.1	456.6	573.8	704.7	841.5	981.2
75°	92.5	114.4	175.2	248.6	337.3	386.5	439.7	556.3	687.7	822.9	958.2
77.5°	72.8	96.9	156.6	229.4	317.6	366.3	418.3	533.8	660.9	790.1	917.6
80°	54.2	81.0	139.1	210.2	296.2	343.8	394.2	505.4	625.8	745.7	863.4
82.5°	37.8	66.2	122.1	191.1	274.3	319.8	367.9	471.4	585.3	694.3	801.0
85°	23.0	53.1	105.1	172.5	251.9	294.6	340.0	435.8	540.9	638.4	732.6
87.5°	9.9	41.1	90.3	154.4	229.4	269.9	311.5	401.9	493.9	580.4	664.1
90°	0.5	30.7	77.2	137.4	208.1	245.8	284.7	365.7	450.6	527.3	601.7
92.5°	0.0	26.3	69.5	127.0	193.3	228.3	264.5	338.9	415.6	484.0	550.3
95°	0.5	21.9	63.0	115.5	178.5	211.9	245.3	314.8	383.8	446.8	507.5
97.5°	0.5	18.1	55.8	105.1	164.8	195.5	226.7	291.3	353.7	413.4	469.8
100°	0.5	14.2	49.3	95.3	150.6	179.0	208.6	269.4	328.0	383.8	436.9
102.5°	0.5	10.4	43.8	86.0	137.4	164.3	191.6	249.1	304.4	358.1	408.4
105°	0.5	7.1	38.3	77.2	125.4	150.6	176.3	230.5	283.1	334.5	383.8
107.5°	0.5	4.9	33.4	69.0	112.2	137.4	161.5	213.0	263.4	313.2	361.4
110°	0.5	4.4	29.0	61.9	101.8	124.8	147.8	196.6	244.7	292.4	339.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.5	3.8	24.6	55.3	91.4	112.2	134.7	180.7	227.8	273.8	318.7
115°	0.5	3.8	20.3	49.3	82.7	101.3	122.1	165.4	210.2	254.6	298.4
117.5°	0.5	3.8	16.4	43.8	74.5	91.4	109.5	151.1	192.7	236.0	278.7
120°	0.5	3.3	13.1	38.3	67.3	82.7	99.6	137.4	175.8	216.3	257.3
122.5°	0.5	3.3	11.0	33.4	60.2	74.5	89.8	123.2	159.9	197.1	235.4
125°	0.5	2.7	9.3	27.9	53.1	66.8	80.5	110.6	144.5	179.0	214.1
127.5°	1.1	2.7	7.7	23.0	46.0	58.0	71.2	98.6	128.1	159.3	192.7
130°	1.1	2.7	6.6	17.5	38.9	49.8	61.3	86.5	113.9	140.7	169.7
132.5°	1.1	2.2	6.0	13.7	32.3	42.2	52.6	75.0	99.1	123.2	148.4
135°	1.1	2.2	4.9	11.0	25.7	34.5	44.3	64.1	85.4	107.9	129.2
137.5°	1.1	1.6	4.4	8.8	19.7	27.9	36.7	54.2	72.8	92.0	111.7
140°	1.1	1.6	3.8	7.1	14.8	20.8	29.0	44.3	60.8	77.7	94.7
142.5°	1.1	1.6	3.3	6.0	11.5	15.9	21.9	36.1	50.4	64.6	79.4
145°	1.1	1.6	2.7	4.9	8.8	12.0	15.9	27.9	40.5	53.1	65.7
147.5°	1.1	1.6	2.7	4.4	7.1	9.3	12.0	20.3	31.8	42.2	53.1
150°	1.1	1.6	2.2	3.8	6.0	7.1	8.8	14.2	23.0	32.3	41.6
152.5°	1.1	1.1	2.2	3.3	4.4	5.5	6.6	10.4	15.9	23.0	31.2
155°	1.1	1.1	1.6	2.7	3.8	4.4	4.9	7.1	10.4	14.8	20.8
157.5°	1.1	1.1	1.6	2.2	2.7	3.3	3.8	4.9	7.1	9.3	12.6
160°	1.1	1.1	1.6	2.2	2.2	2.7	2.7	3.3	4.4	5.5	7.1
162.5°	1.1	1.1	1.6	1.6	1.6	2.2	2.2	2.2	2.7	2.7	3.3
165°	1.1	1.1	1.1	1.6	1.1	1.6	1.1	1.6	1.6	1.1	1.1
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	753.4	753.4	753.4	753.4	753.4	753.4	753.4	753.4	753.4	753.4	753.4
2.5°	757.8	753.9	752.3	750.1	748.5	747.4	745.7	744.6	743.0	743.0	743.5
5°	756.7	752.8	751.7	749.6	748.5	747.9	746.8	747.4	747.4	747.9	747.4
7.5°	754.5	751.2	750.1	749.0	747.9	747.4	746.8	747.9	747.9	748.5	748.5
10°	750.6	748.5	748.5	747.4	746.8	746.3	745.2	746.8	746.8	747.9	747.4
12.5°	746.3	745.7	746.3	746.8	746.8	746.3	745.7	747.9	749.0	749.0	749.6
15°	741.3	742.4	745.2	746.8	747.9	747.9	749.0	751.2	752.8	753.4	753.4
17.5°	737.5	740.2	745.2	749.6	751.7	752.8	755.6	760.0	762.7	763.2	763.2
20°	734.8	741.3	750.1	758.3	761.1	763.2	768.7	774.2	778.0	778.6	778.6
22.5°	737.0	747.9	760.0	769.3	773.1	775.8	781.9	789.0	793.4	793.9	793.9
25°	742.4	755.6	769.3	780.8	785.1	788.4	795.0	802.7	807.0	808.7	808.1
27.5°	747.4	763.2	779.1	792.3	797.2	801.6	809.8	818.5	824.0	825.7	824.6
30°	751.7	770.4	788.4	804.3	810.9	815.8	825.7	836.1	843.2	844.8	843.2
32.5°	756.1	778.6	799.9	818.5	825.1	832.2	844.8	856.9	864.0	866.2	865.1
35°	762.1	788.4	813.6	835.0	843.7	851.9	866.7	881.0	889.7	891.4	889.7
37.5°	770.4	801.0	828.9	855.8	865.1	876.6	894.1	911.1	921.5	923.7	921.5
40°	780.8	816.9	849.7	881.0	893.5	905.6	926.9	947.2	958.7	962.5	960.9
42.5°	794.4	836.6	874.9	912.2	926.4	941.7	966.9	990.5	1003.6	1008.0	1003.6
45°	811.4	861.2	905.6	948.8	965.3	983.9	1014.0	1040.8	1056.2	1060.0	1056.2
47.5°	833.9	890.3	941.7	991.6	1011.3	1033.2	1068.8	1099.4	1115.8	1120.2	1116.4
50°	858.0	925.3	984.4	1041.4	1066.0	1089.0	1130.6	1164.6	1182.1	1190.3	1183.2
52.5°	888.1	963.6	1033.2	1096.7	1126.2	1153.6	1199.6	1236.8	1258.2	1265.3	1255.5
55°	924.2	1009.6	1087.4	1160.7	1190.3	1221.0	1271.9	1311.3	1333.8	1341.4	1334.3
57.5°	964.2	1058.4	1144.3	1221.5	1256.0	1287.2	1344.2	1385.2	1404.9	1414.8	1406.0
60°	1005.8	1108.7	1201.8	1283.9	1321.7	1354.0	1412.0	1452.6	1473.4	1483.2	1475.0
62.5°	1046.3	1157.5	1255.5	1340.9	1377.0	1412.6	1470.6	1509.5	1530.9	1539.6	1532.0
65°	1081.3	1198.5	1299.3	1387.4	1424.6	1459.7	1514.4	1551.7	1574.1	1580.1	1574.7
67.5°	1107.6	1226.4	1328.3	1415.3	1451.5	1486.5	1538.5	1573.0	1594.9	1600.4	1595.5
70°	1119.7	1237.4	1338.1	1423.0	1458.6	1489.8	1539.1	1571.9	1592.7	1596.0	1592.2
72.5°	1112.0	1226.4	1323.9	1404.9	1438.9	1466.3	1511.7	1542.9	1562.6	1565.4	1562.6
75°	1083.5	1193.0	1285.0	1360.6	1392.3	1415.3	1458.6	1487.6	1507.3	1509.5	1506.2
77.5°	1035.4	1137.2	1221.5	1294.3	1320.6	1343.1	1384.1	1409.9	1425.7	1429.0	1425.2
80°	970.7	1064.4	1139.9	1205.1	1230.3	1249.4	1289.4	1317.3	1326.1	1330.5	1325.0
82.5°	896.8	980.6	1047.9	1107.1	1129.5	1153.1	1178.8	1204.5	1217.1	1221.0	1216.6
85°	817.4	891.9	951.6	1004.7	1024.4	1045.8	1068.2	1093.4	1104.3	1108.2	1103.8
87.5°	738.1	803.8	856.3	903.4	921.5	940.6	967.5	980.6	995.4	999.8	994.8
90°	666.9	726.0	773.1	815.8	832.8	850.3	871.1	887.5	901.2	905.0	900.7
92.5°	609.4	662.5	705.8	744.1	758.9	775.3	795.5	811.4	823.5	827.3	822.9
95°	561.8	610.5	651.0	686.6	700.8	716.2	738.6	751.2	762.1	765.4	762.1
97.5°	521.2	567.2	605.6	640.0	653.7	668.0	689.9	702.5	712.9	715.6	712.9
100°	485.6	530.5	568.3	601.2	614.9	628.6	649.9	662.5	672.4	675.6	672.4
102.5°	456.1	499.3	536.6	570.0	583.1	596.8	617.1	631.8	639.5	643.3	640.0
105°	430.3	472.5	509.7	542.6	556.3	569.4	590.2	603.9	612.7	617.1	613.2
107.5°	406.8	448.4	486.2	518.0	531.6	544.8	566.1	579.8	588.0	593.0	588.6
110°	384.4	425.4	461.6	494.4	508.1	521.8	543.1	556.8	565.0	569.4	565.6



TEST NUMBER: P201243

CATALOG NUMBER: 4LBLED-LD4-6-SYMF-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	362.5	402.4	439.7	471.4	484.6	498.2	520.1	534.4	542.0	547.0	542.6
115°	340.6	380.0	416.1	446.8	459.9	474.2	495.5	510.3	518.5	522.3	518.0
117.5°	319.2	357.0	391.5	421.6	434.7	448.4	469.2	484.0	492.8	496.6	492.2
120°	297.3	333.4	367.4	394.8	408.4	421.0	442.4	456.6	465.4	469.2	464.8
122.5°	273.8	309.3	341.7	368.5	381.6	393.7	414.5	428.7	436.9	440.8	436.9
125°	249.7	283.1	314.3	341.1	352.1	363.6	383.8	397.5	406.3	409.5	406.3
127.5°	225.6	256.2	285.3	308.8	320.8	331.8	351.0	364.1	371.8	375.6	372.9
130°	201.5	230.5	256.8	278.1	288.5	298.9	316.5	328.5	336.2	339.5	336.7
132.5°	175.8	203.7	229.4	248.0	257.9	266.6	282.5	292.9	299.5	303.3	300.0
135°	152.8	175.8	199.8	219.0	228.9	236.5	250.8	259.5	265.5	268.8	265.5
137.5°	132.0	151.7	171.4	188.3	197.7	205.9	219.6	227.8	233.2	236.5	233.2
140°	112.8	129.8	147.3	161.0	169.2	175.8	188.3	195.5	200.4	203.1	199.8
142.5°	94.2	109.5	124.3	136.9	144.0	149.5	161.5	167.0	170.8	172.5	170.8
145°	78.3	90.9	103.5	115.0	120.5	124.8	136.9	142.9	146.2	147.8	146.2
147.5°	63.5	73.9	84.3	93.6	98.6	104.0	112.2	119.4	122.1	123.2	122.1
150°	49.8	59.1	67.3	75.0	78.8	82.7	89.8	96.9	99.6	101.3	99.6
152.5°	37.8	45.4	52.0	58.0	61.3	64.6	70.6	77.2	79.9	81.0	79.9
155°	27.4	32.9	38.9	43.3	46.0	48.2	52.6	56.9	61.3	61.3	61.3
157.5°	17.0	21.4	26.3	30.1	31.8	33.9	37.2	41.1	44.3	46.0	46.0
160°	8.8	11.5	14.8	17.5	19.2	20.8	23.0	26.3	28.5	30.1	29.0
162.5°	3.8	4.9	6.6	7.7	8.8	9.3	11.0	12.6	13.7	16.4	14.2
165°	1.1	1.1	1.6	2.2	2.2	2.2	2.7	3.3	3.8	6.0	4.4
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P201243

CATALOG NUMBER: 4LBLEDD4-6-SYMF-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	753.4	753.4	753.4	753.4	753.4	753.4	753.4	753.4	753.4	753.4	753.4
2.5°	744.6	746.3	748.5	749.6	751.2	752.3	755.0	758.3	755.6	751.7	752.3
5°	747.4	746.8	748.5	749.6	750.6	751.2	753.9	757.2	753.9	750.1	750.1
7.5°	748.5	747.9	748.5	749.0	749.6	749.6	752.3	755.0	751.7	746.8	745.7
10°	746.8	746.3	746.8	747.9	747.9	747.9	749.6	751.7	747.9	741.9	739.7
12.5°	747.9	746.3	746.3	746.8	746.8	745.7	746.3	747.9	743.0	736.4	733.1
15°	751.7	749.0	747.9	747.9	746.8	744.1	743.0	743.0	737.5	728.7	724.4
17.5°	761.1	756.7	753.4	751.7	749.6	744.6	740.8	738.6	731.5	721.6	714.5
20°	775.3	769.3	764.3	761.1	758.3	749.6	741.9	735.9	726.0	714.0	704.7
22.5°	789.5	783.0	775.8	772.5	768.7	758.9	748.5	738.1	723.3	706.8	694.3
25°	803.2	796.6	788.4	785.1	780.2	768.7	755.6	743.5	724.4	701.9	683.9
27.5°	819.1	810.9	802.1	797.2	791.7	778.6	763.8	749.0	727.7	701.9	676.7
30°	837.2	827.3	815.8	810.3	803.8	788.4	770.4	752.8	729.8	701.9	672.9
32.5°	858.0	846.5	832.8	825.1	817.4	799.4	778.0	757.8	731.5	701.4	669.6
35°	882.1	868.9	852.5	843.7	834.4	813.1	787.9	763.2	734.2	700.8	665.2
37.5°	912.2	896.8	877.1	866.2	855.2	830.0	801.0	771.5	738.6	701.4	661.9
40°	948.3	930.2	907.2	893.5	880.4	851.4	816.9	781.9	744.6	702.5	658.7
42.5°	991.0	969.1	943.4	927.5	912.2	876.0	836.6	795.0	752.8	704.7	657.0
45°	1041.9	1018.9	986.1	966.4	949.4	907.2	861.8	812.5	764.9	710.1	656.5
47.5°	1100.5	1071.5	1035.9	1012.9	992.7	943.9	891.4	834.4	778.6	717.2	657.6
50°	1166.2	1133.4	1092.3	1068.2	1043.0	987.2	926.4	860.2	796.1	727.7	660.3
52.5°	1238.5	1202.3	1158.0	1129.5	1101.6	1037.0	965.8	893.0	816.3	740.8	665.2
55°	1313.5	1274.6	1225.3	1194.1	1162.9	1091.8	1012.4	928.6	843.2	757.2	673.4
57.5°	1386.3	1346.3	1292.1	1260.4	1225.3	1149.8	1062.2	967.5	872.2	776.4	682.8
60°	1453.7	1413.7	1358.9	1326.6	1288.3	1207.3	1113.1	1010.2	902.3	796.6	693.7
62.5°	1510.6	1472.3	1417.5	1384.7	1345.3	1261.5	1161.8	1051.8	935.2	818.0	704.1
65°	1552.8	1516.6	1463.5	1429.6	1391.8	1304.7	1202.9	1088.5	962.5	836.6	713.4
67.5°	1574.1	1540.2	1488.7	1456.4	1419.2	1332.7	1230.8	1113.1	983.3	849.7	719.4
70°	1571.9	1539.6	1491.4	1459.7	1424.1	1340.9	1240.7	1123.0	992.7	854.7	718.3
72.5°	1543.5	1511.2	1467.9	1437.2	1403.3	1325.5	1227.0	1114.2	985.5	847.0	709.6
75°	1487.1	1457.5	1413.7	1388.5	1357.8	1285.6	1191.4	1081.9	961.4	826.8	691.5
77.5°	1406.0	1383.6	1340.9	1317.3	1287.2	1220.4	1131.7	1033.2	919.3	792.8	663.6
80°	1306.9	1288.3	1246.7	1225.9	1196.3	1138.3	1061.6	966.4	863.4	746.8	627.5
82.5°	1198.5	1177.2	1144.3	1125.1	1097.2	1045.2	972.4	894.6	798.8	694.3	585.3
85°	1086.3	1066.6	1036.5	1020.0	995.4	948.8	883.7	815.3	730.4	636.2	539.9
87.5°	979.5	960.3	931.9	917.1	894.6	853.0	796.1	735.9	660.9	580.4	491.7
90°	887.0	868.9	842.1	828.4	808.1	770.4	718.9	664.7	598.4	524.5	448.4
92.5°	810.9	794.4	769.3	756.1	738.1	703.6	657.0	607.7	548.1	484.0	413.4
95°	750.6	734.8	712.3	699.7	682.8	647.2	606.1	560.1	505.4	446.8	381.6
97.5°	701.9	688.8	664.1	652.1	638.4	602.3	565.0	519.6	468.7	413.9	353.1
100°	662.5	647.7	625.3	613.8	599.5	565.6	527.8	485.1	435.8	383.8	327.4
102.5°	631.8	616.5	595.7	582.6	568.9	534.4	497.1	455.5	408.4	358.1	303.9
105°	604.5	589.7	568.9	555.7	542.0	508.1	472.5	430.3	383.8	335.1	282.5
107.5°	578.7	565.6	544.8	531.6	518.0	484.0	448.4	406.8	361.4	313.7	262.8
110°	556.8	542.6	520.7	508.1	493.3	461.0	425.4	384.9	339.5	292.9	244.2



TEST NUMBER: P201243

CATALOG NUMBER: 4LBLED-LD4-6-SYMF-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	534.9	519.6	497.7	485.1	470.3	438.0	403.0	363.0	318.7	273.8	226.7
115°	510.8	496.1	473.1	460.5	445.7	413.9	380.0	341.1	298.4	254.6	209.2
117.5°	485.1	470.3	447.3	435.3	421.0	389.8	357.5	319.8	278.1	236.0	191.6
120°	457.2	442.9	421.0	409.0	395.3	365.2	334.0	296.2	256.8	216.3	175.2
122.5°	428.7	415.0	393.7	381.6	368.5	340.0	309.3	272.7	234.9	197.1	159.3
125°	398.0	384.4	364.1	352.6	339.5	312.1	282.5	248.0	213.0	179.0	142.9
127.5°	362.5	351.5	331.8	320.3	308.3	284.2	255.7	224.5	192.2	159.3	127.0
130°	328.5	317.0	298.4	288.0	277.6	255.7	230.5	200.4	168.6	140.2	111.1
132.5°	292.9	282.5	266.6	257.9	248.6	228.9	203.1	173.6	146.7	122.1	96.4
135°	259.5	250.8	236.5	228.9	219.6	198.7	174.7	150.0	127.6	105.7	82.7
137.5°	228.3	219.6	206.4	198.2	188.3	169.7	150.0	129.8	109.0	90.3	70.1
140°	195.5	188.3	176.3	169.2	160.4	144.5	128.1	109.0	92.5	75.6	58.0
142.5°	167.5	161.5	149.5	142.9	135.2	122.1	106.8	92.0	77.2	62.4	47.6
145°	143.4	137.4	124.3	119.4	112.2	100.7	88.2	75.0	63.0	50.4	38.3
147.5°	119.9	112.8	101.3	96.9	91.4	81.6	71.7	61.3	50.9	40.0	29.6
150°	98.0	89.8	80.5	77.7	72.3	64.6	56.4	47.6	39.4	30.7	21.4
152.5°	77.2	70.1	62.4	59.7	55.3	50.4	43.3	36.1	29.6	21.4	14.8
155°	57.5	52.0	46.0	44.3	41.1	37.2	31.2	25.7	19.7	14.2	10.4
157.5°	40.5	36.1	31.8	30.7	28.5	25.2	20.3	15.9	12.6	9.3	7.1
160°	25.2	22.4	19.2	18.1	16.4	14.2	11.0	9.3	7.7	6.0	4.4
162.5°	12.0	10.4	9.3	8.8	7.7	6.6	6.0	4.9	4.4	3.8	3.3
165°	4.4	4.4	4.4	3.8	3.8	3.8	3.8	3.3	2.7	2.7	2.2
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P201243

CATALOG NUMBER: 4LBLED-LD4-6-SYMF-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	753.4	753.4	753.4	753.4	753.4	753.4	753.4	753.4
2.5°	752.8	753.9	753.9	754.5	756.1	759.4	763.8	764.3
5°	750.6	751.2	751.2	751.2	752.8	755.6	760.0	760.5
7.5°	745.7	745.7	745.7	745.7	747.4	749.6	753.4	753.9
10°	739.1	738.6	738.6	738.1	739.1	740.8	745.2	744.6
12.5°	730.9	729.8	729.3	729.3	728.7	730.4	733.1	733.7
15°	721.6	719.4	718.3	717.2	716.7	716.7	720.0	719.4
17.5°	710.7	707.4	705.8	704.1	701.9	701.9	704.1	703.6
20°	698.1	693.7	691.0	688.8	685.5	684.4	685.5	684.9
22.5°	685.5	678.4	675.6	672.4	667.4	665.2	664.7	664.1
25°	670.7	661.9	658.1	654.8	647.7	645.0	642.2	641.1
27.5°	657.6	645.0	640.0	634.6	626.4	622.5	618.1	617.1
30°	646.1	627.5	619.8	614.3	603.9	597.9	592.4	591.3
32.5°	637.3	611.6	601.2	594.6	580.4	572.2	565.0	561.8
35°	629.6	596.8	583.1	572.7	555.7	545.9	536.0	533.3
37.5°	622.5	584.2	566.1	551.9	532.7	518.5	507.5	503.2
40°	615.4	572.7	550.8	532.7	507.5	491.1	477.4	472.0
42.5°	608.8	561.2	537.7	515.8	482.9	463.2	448.4	440.8
45°	602.8	550.8	525.1	501.0	458.8	435.8	417.8	410.6
47.5°	598.4	540.9	512.5	486.2	436.4	407.9	389.3	380.0
50°	595.2	531.6	500.4	471.4	416.7	381.1	360.3	349.3
52.5°	593.5	523.4	489.5	458.3	398.6	355.3	330.7	322.5
55°	594.1	516.9	480.2	446.2	381.6	330.7	303.3	290.7
57.5°	595.2	510.8	470.9	434.2	364.6	306.6	275.9	262.8
60°	597.3	505.9	462.7	422.7	348.8	285.8	250.8	238.2
62.5°	599.5	501.5	454.4	411.7	333.4	266.6	225.6	211.3
65°	600.1	495.0	445.7	400.8	318.1	247.5	199.8	186.2
67.5°	597.9	486.7	434.7	388.2	302.2	228.9	175.8	161.5
70°	591.3	475.8	422.1	374.0	284.7	210.8	152.8	137.4
72.5°	579.3	461.6	407.4	358.1	267.7	191.6	132.0	113.3
75°	562.3	444.0	389.8	340.0	249.7	173.6	112.8	92.0
77.5°	539.3	421.6	369.0	319.8	230.0	154.9	96.4	72.3
80°	509.7	398.0	346.0	297.8	210.8	138.0	80.5	53.7
82.5°	474.7	371.2	321.4	275.4	192.7	120.5	65.7	37.2
85°	438.6	342.2	295.7	251.9	173.6	104.0	53.1	21.9
87.5°	403.0	313.2	271.0	230.5	153.9	89.2	41.1	8.8
90°	367.9	285.3	245.3	207.5	136.9	75.6	30.7	0.0
92.5°	338.9	264.5	228.3	192.2	125.9	68.4	26.3	0.0
95°	313.2	244.7	210.2	176.8	114.4	61.9	21.9	0.0
97.5°	289.6	226.1	194.4	162.6	104.0	54.8	18.1	0.0
100°	267.2	207.5	177.9	149.5	94.2	48.7	13.7	0.0
102.5°	247.5	191.1	163.2	135.2	84.3	42.7	9.9	0.0
105°	228.3	175.2	149.5	122.6	75.6	37.2	6.0	0.0
107.5°	211.3	160.4	135.8	111.1	67.3	32.3	3.8	0.0
110°	194.9	146.7	122.6	100.2	60.2	27.9	3.3	0.0



TEST NUMBER: P201243

CATALOG NUMBER: 4LBLED-LD4-6-SYMF-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	179.6	133.6	111.1	89.8	54.2	23.5	3.3	0.0
115°	163.7	121.0	100.2	81.0	48.2	19.2	2.7	0.0
117.5°	150.0	109.0	90.3	73.9	42.2	15.3	2.7	0.0
120°	136.3	98.6	82.1	66.2	36.7	11.5	2.7	0.0
122.5°	122.6	89.2	73.4	59.1	31.8	9.3	2.2	0.0
125°	110.1	79.4	65.2	51.5	26.3	8.2	2.2	0.0
127.5°	97.5	69.5	56.4	44.3	20.8	7.1	1.6	0.0
130°	84.9	59.7	48.2	37.2	15.9	6.0	1.6	0.0
132.5°	73.4	50.4	40.5	30.7	12.6	4.9	1.1	0.0
135°	61.9	42.2	33.4	24.1	9.9	4.4	1.1	0.0
137.5°	52.0	34.5	26.3	18.1	8.2	3.3	1.1	0.0
140°	42.7	27.4	19.7	13.7	6.6	2.7	0.5	0.0
142.5°	33.9	20.3	14.8	10.4	5.5	2.2	0.5	0.0
145°	26.3	14.8	11.0	8.2	4.9	1.6	0.5	0.0
147.5°	19.2	11.5	8.8	7.1	3.8	1.6	0.5	0.0
150°	13.7	8.8	7.1	5.5	2.7	1.1	0.5	0.0
152.5°	10.4	6.6	5.5	4.4	2.2	1.1	0.5	0.0
155°	7.7	4.9	4.4	3.3	1.6	1.1	0.5	0.0
157.5°	5.5	3.8	3.3	2.2	1.6	1.1	0.5	0.0
160°	3.3	2.7	2.2	1.6	1.1	0.5	0.5	0.0
162.5°	2.7	1.6	1.6	1.6	1.1	0.5	0.5	0.0
165°	1.6	1.1	1.1	1.1	0.5	0.5	0.5	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)