

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: P201291

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P201291
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P28136)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4LBLED-LD4-6-SYMW-UNV-L840-CD1-U
Description: 4 ft. Low Bay Linear, 6000 lm, Wht Sym lens, 4K
Light Source: (392) 4000K CCT, 80 CRI LEDS
2UT217098A8404C
Ballast/Driver: OSRAM
(OTI50W0960CC)

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6096.0 lumens
Efficiency: N/A
Efficacy: 142.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 2.12 / 1.93
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.21')
CIE Type: Semi-Direct

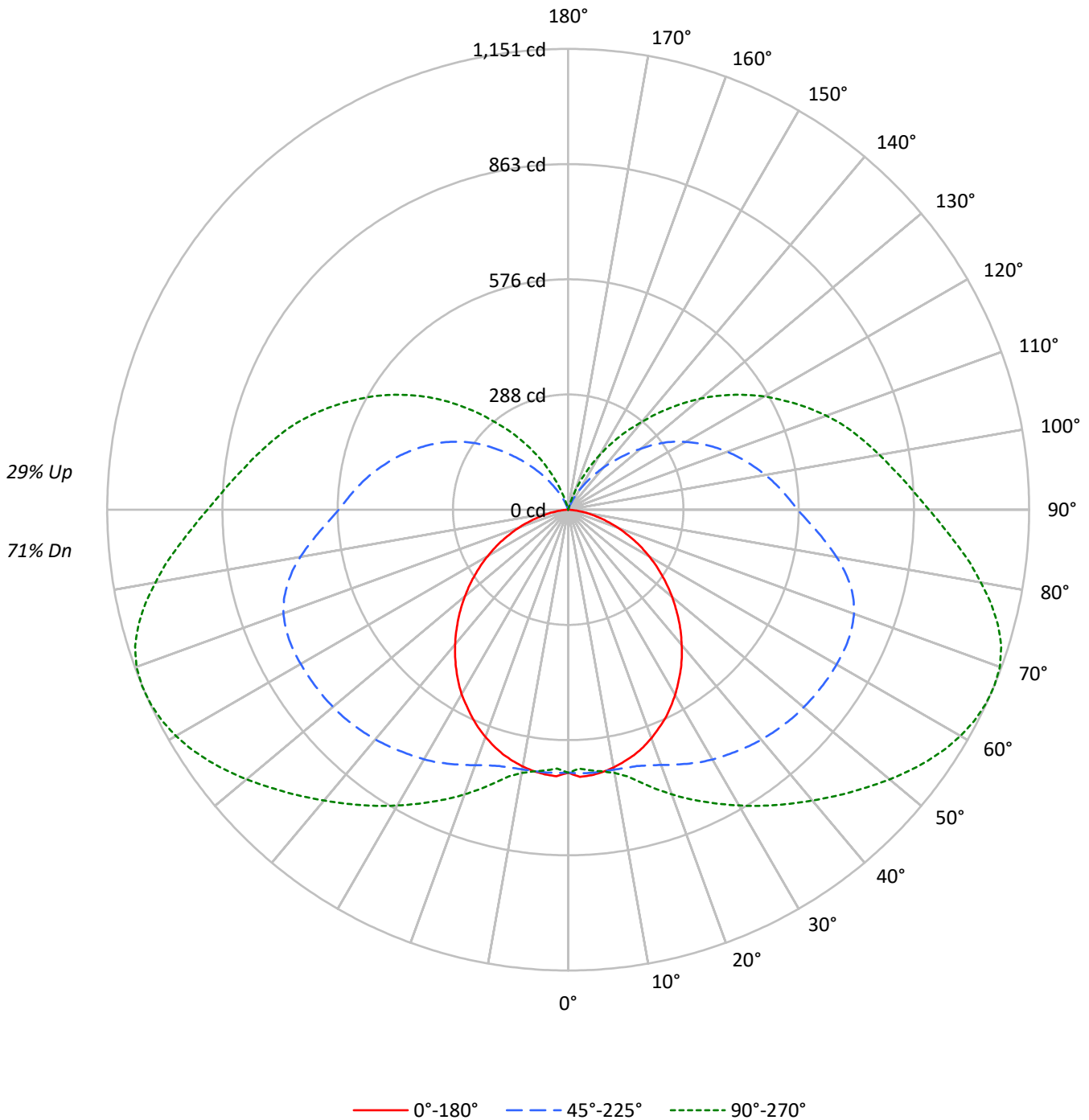
Input Watts (W): 42.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	112	112	112	112	106	106	106	106	95	95	95	85	85	85	75	75	75	71
1	97	90	84	79	91	85	80	75	75	71	67	66	63	60	58	55	53	49
2	86	76	67	60	81	71	64	57	63	57	51	55	50	46	48	44	40	36
3	77	65	55	48	72	61	52	45	54	47	41	47	41	36	41	36	32	28
4	70	56	46	39	65	53	44	37	47	39	33	41	35	30	35	30	26	23
5	64	50	40	32	60	47	38	31	41	34	28	36	30	25	31	26	22	19
6	59	44	34	27	55	42	33	26	37	29	24	32	26	21	28	23	19	16
7	54	40	30	24	50	37	29	23	33	26	20	29	23	18	25	20	16	14
8	50	36	27	21	47	34	25	20	30	23	18	26	20	16	23	18	14	12
9	47	33	24	18	44	31	23	17	27	21	16	24	18	14	21	16	13	10
10	43	30	22	16	41	28	21	15	25	19	14	22	17	13	20	15	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	10579	10579	10579
5°	10721	9535	10685
10°	10599	8954	10563
15°	10441	8827	10395
20°	10219	8928	10163
25°	9969	9052	9894
30°	9643	9232	9614
35°	9291	9463	9249
40°	8882	9754	8850
45°	8457	10124	8409
50°	7988	10574	7948
55°	7474	11065	7432
60°	6912	11540	6862
65°	6253	11942	6199
70°	5462	12220	5396
75°	4453	12245	4281
80°	3296	12041	3060
85°	1716	11800	1519



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.7	1.0
10°-20°	188.8	3.1
20°-30°	319.6	5.2
30°-40°	447.0	7.3
40°-50°	563.1	9.2
50°-60°	661.2	10.8
60°-70°	723.0	11.9
70°-80°	714.4	11.7
80°-90°	627.6	10.3
90°-100°	534.2	8.8
100°-110°	445.5	7.3
110°-120°	345.0	5.7
120°-130°	240.2	3.9
130°-140°	140.2	2.3
140°-150°	63.9	1.0
150°-160°	18.3	0.3
160°-170°	1.3	0.0
170°-180°	0.0	0.0
0°-30°	571.2	9.4
0°-40°	1018.1	16.7
0°-60°	2242.5	36.8
0°-90°	4307.4	70.7
90°-120°	1324.7	21.7
90°-150°	1769.0	29.0
90°-180°	1789.0	29.3
0°-180°	6096.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	656	656	656	656	656	
5°	666	660	654	659	664	63
15°	635	663	706	663	632	179
25°	574	700	805	700	570	264
35°	490	736	901	735	487	306
45°	390	760	998	759	388	301
55°	286	772	1094	770	284	256
65°	182	771	1150	769	181	181
75°	85	730	1111	726	82	92
85°	15	624	972	622	13	19
90°	0	573	901	573	0	1
95°	0	537	842	537	0	0
105°	0	462	740	463	0	1
115°	0	382	627	383	0	0
125°	1	292	500	292	0	1
135°	1	185	359	185	0	1
145°	2	95	222	94	1	1
155°	2	27	99	25	1	1
165°	2	3	7	0	1	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°	656.5	656.5	656.5	656.5	656.5	656.5	656.5	656.5	656.5	656.5	656.5
2.5°	668.0	667.4	664.7	660.3	658.7	657.6	657.0	655.4	654.8	655.9	659.2
5°	665.8	664.7	662.5	658.7	657.0	656.5	655.9	654.3	653.7	655.4	659.7
7.5°	660.8	660.3	658.1	654.3	653.7	652.6	652.6	651.5	651.5	654.3	659.2
10°	653.7	653.2	651.0	648.2	647.7	647.7	647.7	647.7	648.8	653.2	659.2
12.5°	644.4	644.4	642.8	640.6	641.1	641.1	641.7	642.8	646.1	652.6	660.3
15°	634.6	634.0	632.4	631.8	633.5	634.0	635.7	638.4	643.9	653.2	663.0
17.5°	622.0	622.0	620.3	620.9	624.2	625.8	628.5	633.5	642.2	654.8	669.1
20°	607.2	607.7	607.2	608.8	614.3	617.6	620.9	629.1	641.7	659.2	678.4
22.5°	590.8	591.9	591.9	596.2	603.4	608.3	613.2	624.7	642.8	666.9	689.3
25°	574.3	574.3	576.0	582.0	591.9	597.9	605.5	622.0	646.6	675.1	700.3
27.5°	554.6	556.3	559.0	567.2	580.9	589.1	598.4	622.0	651.0	683.3	711.2
30°	533.8	535.5	539.8	551.3	568.9	579.3	592.4	622.0	654.8	689.9	720.5
32.5°	511.9	514.7	520.7	535.5	556.8	571.1	588.0	621.4	658.1	695.3	728.2
35°	489.5	492.2	501.5	519.0	547.0	563.4	583.1	619.8	659.7	700.3	735.9
37.5°	465.9	470.9	481.3	503.2	537.1	556.8	577.6	618.1	661.4	704.1	743.5
40°	440.7	445.7	460.5	486.7	527.2	548.1	571.1	615.9	662.5	707.9	750.1
42.5°	416.1	422.7	439.6	471.4	517.4	540.4	564.5	612.7	661.9	710.7	755.6
45°	390.4	398.0	418.8	456.6	506.4	531.1	556.8	608.3	660.8	712.3	760.5
47.5°	364.1	373.4	398.0	441.8	495.5	521.2	549.1	603.9	659.2	713.4	764.9
50°	338.4	349.3	377.2	427.1	483.4	510.8	539.8	599.0	656.5	713.9	767.6
52.5°	312.6	324.7	357.5	412.3	470.9	499.9	530.5	593.0	653.2	713.4	770.3
55°	285.8	298.9	337.8	396.4	457.7	487.8	520.1	585.3	648.2	711.2	772.0
57.5°	260.1	274.8	319.2	381.1	444.0	475.8	510.3	577.1	642.8	709.6	773.6
60°	233.8	250.8	300.0	363.5	429.8	462.6	498.2	567.8	636.2	705.7	773.6
62.5°	208.1	227.2	281.4	347.7	415.6	449.5	486.2	557.4	629.1	701.9	773.6
65°	182.3	204.2	262.3	330.1	399.7	435.3	472.5	546.4	620.3	696.4	771.4
67.5°	157.1	182.3	242.5	312.1	383.3	419.9	458.3	533.8	610.5	689.3	767.1
70°	132.5	160.4	222.8	292.9	366.3	402.4	442.4	520.1	599.0	680.0	759.4
72.5°	107.9	139.6	202.0	273.8	348.2	385.4	426.0	504.3	584.7	667.4	747.3
75°	85.4	118.8	182.3	254.0	329.6	367.4	407.9	486.7	567.8	651.0	729.8
77.5°	65.2	99.6	163.2	234.9	309.9	349.3	389.3	467.6	548.1	630.2	706.8
80°	46.0	81.0	144.0	215.2	290.2	329.1	368.5	446.8	527.2	605.5	680.6
82.5°	28.5	64.1	124.8	196.0	271.0	309.3	348.2	426.0	503.7	579.8	652.1
85°	14.8	48.2	106.8	177.9	252.4	290.2	328.5	404.6	479.6	553.5	624.2
87.5°	4.9	35.0	92.0	162.1	235.4	273.2	310.4	384.4	457.2	527.8	596.8
90°	0.0	26.3	81.0	149.5	221.2	257.9	295.1	366.3	437.5	507.0	572.7
92.5°	0.0	22.4	73.9	140.7	211.3	247.5	283.6	354.2	422.7	490.0	554.1
95°	0.0	18.1	67.9	131.9	200.9	236.5	272.1	341.1	408.4	474.1	536.6
97.5°	0.0	14.2	61.3	123.7	190.5	225.0	259.5	328.0	393.7	458.3	518.5
100°	0.5	11.0	54.2	113.3	179.6	213.5	246.9	313.7	377.8	440.2	499.9
102.5°	0.5	7.7	47.6	104.6	168.1	200.9	233.8	298.9	361.9	423.8	480.7
105°	0.5	5.5	41.1	95.3	157.1	188.9	221.2	284.7	346.0	405.7	461.5
107.5°	0.5	3.8	35.0	86.5	146.2	176.3	207.5	269.4	329.6	387.6	442.4
110°	0.5	2.7	29.6	77.2	134.1	164.3	194.4	254.0	312.6	369.0	422.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.5	2.2	24.1	68.4	122.1	151.7	180.7	238.7	295.7	350.4	402.4
115°	0.5	2.2	19.2	60.2	110.0	138.5	166.4	223.4	277.6	331.2	381.6
117.5°	0.5	1.6	14.8	52.0	99.1	125.4	152.2	206.4	260.1	312.1	360.8
120°	0.5	1.6	11.0	43.8	87.6	112.2	138.5	190.0	241.5	291.8	338.4
122.5°	1.1	1.6	8.2	36.7	77.2	99.6	124.8	173.6	221.7	270.5	316.5
125°	1.1	1.1	6.6	29.6	66.2	87.1	109.5	156.6	200.4	246.9	291.8
127.5°	1.1	1.1	4.9	22.4	55.3	74.5	94.7	138.5	181.2	222.8	265.5
130°	1.1	1.1	4.4	16.4	44.9	61.9	80.5	119.9	159.9	198.2	237.1
132.5°	1.1	1.1	3.3	12.0	35.6	50.9	67.3	102.4	139.1	176.3	211.3
135°	1.1	1.1	2.7	8.8	26.8	40.5	54.8	86.0	119.4	154.4	185.1
137.5°	1.1	1.1	2.7	6.6	19.7	30.7	43.3	71.7	101.3	132.5	160.4
140°	1.1	1.1	2.2	5.5	13.7	22.4	32.9	57.5	82.7	111.7	138.5
142.5°	1.1	1.1	1.6	4.4	9.9	15.9	23.5	44.3	66.8	92.0	115.5
145°	1.6	1.1	1.6	3.8	7.1	11.0	16.4	33.4	51.5	73.9	94.7
147.5°	1.1	1.1	1.1	2.7	5.5	7.7	11.0	23.0	38.9	57.5	75.0
150°	1.6	1.1	1.1	2.2	4.4	5.5	7.7	15.3	26.8	42.2	57.5
152.5°	1.6	1.1	1.1	2.2	3.3	4.4	5.5	9.9	17.5	28.5	41.1
155°	1.6	1.1	1.1	1.6	2.7	3.3	4.4	6.6	10.4	17.5	26.8
157.5°	1.6	1.6	1.6	1.6	2.2	2.7	3.3	4.9	6.0	9.9	15.3
160°	1.6	1.6	1.1	1.1	1.6	1.6	2.2	3.3	4.4	5.5	7.7
162.5°	1.6	1.6	1.6	1.1	1.1	1.1	1.6	2.2	2.7	3.8	4.9
165°	1.6	1.6	1.1	1.1	1.1	1.1	1.1	1.1	1.6	2.2	2.7
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°	656.5	656.5	656.5	656.5	656.5	656.5	656.5	656.5	656.5	656.5	656.5
2.5°	660.3	657.6	656.5	654.3	652.6	651.5	649.9	648.8	647.7	647.2	647.2
5°	660.8	658.1	657.0	655.4	654.8	653.7	652.6	653.7	653.2	653.7	653.2
7.5°	661.4	659.2	659.2	658.7	658.1	658.1	657.0	658.1	658.7	659.2	658.7
10°	663.0	662.5	663.6	664.1	664.1	664.1	664.1	665.2	667.4	667.4	666.9
12.5°	665.8	667.4	670.7	673.4	674.5	674.5	676.7	678.9	681.6	682.2	681.6
15°	671.2	676.2	683.3	689.3	692.0	693.7	698.1	701.9	704.6	705.7	704.6
17.5°	681.1	690.4	701.4	710.1	713.4	715.6	721.6	725.4	728.7	731.5	730.4
20°	694.2	706.8	720.0	730.4	734.8	737.5	744.1	751.2	754.5	756.7	756.1
22.5°	708.5	723.3	738.0	750.6	755.6	758.8	767.1	773.6	778.6	781.3	780.7
25°	722.2	739.1	757.2	770.9	776.9	780.7	789.5	797.2	802.6	804.8	804.3
27.5°	735.9	755.6	775.3	791.1	797.2	802.1	812.5	820.7	827.3	828.9	828.9
30°	746.8	769.8	791.1	809.2	815.8	822.4	833.9	844.8	850.8	853.0	852.5
32.5°	757.2	782.9	807.0	827.3	835.5	842.1	855.8	867.8	874.9	877.1	874.9
35°	767.6	796.1	822.9	844.8	853.6	861.8	877.1	890.8	898.5	900.6	899.6
37.5°	777.5	809.2	838.2	862.3	872.7	881.5	897.4	913.8	922.0	924.2	922.0
40°	786.8	821.3	853.0	879.3	890.8	901.2	919.8	936.2	945.5	948.3	947.2
42.5°	795.5	833.3	867.8	896.8	910.0	920.9	941.7	959.8	969.6	972.9	970.2
45°	803.2	845.4	882.6	913.8	928.0	940.6	964.2	983.9	993.7	997.6	994.3
47.5°	810.9	856.3	896.3	930.8	947.2	960.3	986.6	1007.4	1018.9	1022.2	1018.9
50°	818.0	867.3	911.1	948.3	965.8	980.6	1009.1	1031.5	1043.0	1047.9	1043.5
52.5°	824.5	877.7	924.7	964.7	983.9	1000.3	1031.0	1055.0	1068.7	1072.0	1067.6
55°	831.1	887.5	936.8	980.0	1000.8	1018.4	1051.8	1076.9	1090.6	1094.5	1090.1
57.5°	836.6	896.3	948.3	994.8	1016.2	1036.4	1069.8	1096.1	1110.3	1114.7	1110.3
60°	840.4	903.4	958.7	1006.9	1029.3	1050.1	1085.7	1112.0	1126.2	1130.6	1126.2
62.5°	843.2	908.9	965.8	1016.2	1040.3	1061.6	1097.8	1123.5	1138.3	1142.6	1138.3
65°	843.7	911.1	969.6	1022.2	1046.8	1068.2	1104.9	1130.6	1145.9	1149.8	1145.4
67.5°	840.4	908.9	969.6	1023.3	1047.9	1069.8	1106.5	1132.2	1147.0	1151.4	1147.0
70°	833.9	902.3	964.2	1018.9	1043.5	1065.4	1101.6	1127.9	1142.6	1147.0	1142.1
72.5°	821.3	890.8	952.7	1008.5	1032.1	1053.4	1089.0	1114.7	1129.0	1133.9	1128.4
75°	803.2	872.7	934.6	988.3	1012.9	1032.6	1068.2	1093.4	1106.5	1110.9	1106.0
77.5°	779.7	849.7	909.4	962.5	987.2	1005.2	1039.7	1064.4	1077.5	1081.3	1076.4
80°	752.3	821.8	879.3	931.9	954.9	971.8	1006.3	1029.9	1042.5	1046.3	1043.5
82.5°	722.2	790.1	845.9	897.4	919.3	936.2	970.2	993.2	1005.8	1011.2	1006.9
85°	691.5	756.7	811.4	861.2	883.1	901.2	932.4	955.4	968.0	972.4	969.6
87.5°	660.8	723.8	776.9	825.1	845.4	864.0	895.2	918.2	930.8	935.1	931.9
90°	635.1	695.3	746.3	793.9	814.7	831.7	861.8	883.7	896.3	900.6	897.9
92.5°	614.3	671.8	721.1	764.9	784.6	802.6	831.7	853.0	865.6	869.4	866.7
95°	594.6	650.4	698.1	740.8	759.9	777.5	804.8	825.6	837.7	841.5	839.3
97.5°	576.0	629.6	675.6	717.2	736.9	752.8	779.1	798.8	810.9	814.1	810.9
100°	555.2	609.4	654.3	695.3	712.3	728.2	754.5	774.2	784.6	789.0	786.2
102.5°	535.5	587.5	631.8	672.3	690.4	706.3	730.4	749.5	761.6	764.3	761.6
105°	515.2	565.6	608.8	648.8	666.9	682.2	706.3	724.9	736.4	739.7	736.9
107.5°	494.4	543.1	586.4	624.2	641.7	655.9	680.6	698.6	708.5	714.5	710.1
110°	472.0	520.1	561.7	598.4	615.4	629.1	653.2	671.2	680.6	686.0	682.2



TEST NUMBER: P201291

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

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	451.1	496.6	536.6	572.1	588.0	601.7	625.3	642.8	651.5	657.0	653.2
115°	429.2	471.4	510.8	544.8	560.6	573.2	596.8	613.2	622.0	626.9	623.6
117.5°	405.7	446.8	484.0	517.4	532.2	544.8	567.2	583.6	591.9	595.7	592.4
120°	382.7	422.7	457.7	489.5	504.3	516.3	538.2	553.5	561.2	565.6	562.3
122.5°	358.6	397.5	429.2	461.0	474.7	486.2	505.9	522.3	529.4	533.3	531.1
125°	332.9	371.2	401.9	430.9	444.0	455.0	474.1	487.8	496.0	499.9	497.7
127.5°	306.1	342.7	373.9	400.8	413.4	425.4	441.3	456.6	462.1	466.5	464.3
130°	275.9	312.6	341.6	369.0	381.1	390.9	408.4	421.0	428.2	432.0	430.3
132.5°	246.4	280.3	311.0	335.6	347.1	357.5	373.4	385.4	395.3	395.8	393.7
135°	217.9	247.5	275.4	301.7	313.2	323.6	337.8	348.8	358.1	358.6	355.9
137.5°	190.5	217.9	242.0	266.6	278.7	289.6	302.8	313.2	321.9	323.6	319.7
140°	164.3	189.4	211.3	233.2	244.7	255.1	269.4	278.1	285.3	285.8	283.6
142.5°	139.1	162.1	181.2	201.5	211.9	221.2	237.1	245.8	252.4	254.0	250.8
145°	115.5	135.8	153.8	171.4	180.1	188.9	204.8	215.2	220.6	222.3	219.0
147.5°	93.1	110.0	125.9	141.8	149.5	157.7	170.8	184.0	188.9	190.0	187.2
150°	72.3	86.5	100.7	113.9	120.5	127.6	139.1	151.1	157.7	158.8	156.6
152.5°	53.1	65.2	76.7	87.6	93.1	98.6	108.4	119.9	128.1	128.7	126.5
155°	36.1	46.0	55.3	63.5	68.4	72.8	80.5	89.2	98.0	98.6	96.9
157.5°	21.9	28.5	36.1	42.7	46.0	49.8	55.3	61.9	69.5	71.2	69.5
160°	11.0	14.8	19.2	23.5	26.3	29.0	31.8	37.2	41.6	45.4	43.3
162.5°	5.5	6.6	7.7	9.9	11.0	12.6	14.8	17.0	19.2	23.0	20.3
165°	3.3	3.8	4.4	4.4	4.9	4.9	4.9	4.9	4.9	7.1	4.9
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: P201291

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

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	656.5	656.5	656.5	656.5	656.5	656.5	656.5	656.5	656.5	656.5	656.5
2.5°	648.8	649.9	652.1	653.2	654.3	655.4	657.6	660.8	658.1	655.4	655.9
5°	653.2	653.2	653.7	655.4	655.4	655.9	658.1	661.4	658.7	654.8	654.8
7.5°	658.7	658.1	658.7	659.2	658.7	658.7	659.7	661.4	658.1	653.7	652.6
10°	666.3	664.7	664.1	664.7	664.1	662.5	663.0	663.0	658.7	652.1	649.3
12.5°	680.0	677.3	675.1	674.5	672.9	670.1	668.5	666.3	659.7	652.1	646.6
15°	702.5	698.1	693.7	692.0	689.3	682.7	677.3	672.3	663.0	652.1	644.4
17.5°	727.6	722.2	716.1	713.9	710.1	700.8	691.5	682.2	669.1	653.7	642.8
20°	751.7	745.2	738.0	734.2	730.4	718.9	707.9	695.9	678.9	658.7	642.2
22.5°	775.8	768.2	758.3	755.0	750.1	736.9	723.8	710.1	689.9	665.8	643.3
25°	799.4	790.6	781.3	775.8	770.3	755.6	739.7	723.3	700.3	674.0	647.2
27.5°	822.9	813.0	801.6	795.5	790.1	773.6	755.6	736.9	711.2	681.6	652.1
30°	845.9	834.9	821.3	814.7	808.1	789.5	768.7	747.9	720.0	688.2	655.4
32.5°	868.9	856.8	841.5	833.9	826.2	804.8	781.8	758.3	727.6	694.2	658.1
35°	891.3	878.2	861.2	851.9	843.7	820.7	795.0	768.7	734.8	699.2	659.7
37.5°	914.3	899.6	880.9	870.5	861.2	836.0	807.6	778.0	742.4	703.0	661.4
40°	937.3	921.5	900.6	889.7	878.2	850.8	820.2	787.3	749.0	706.8	661.9
42.5°	960.9	943.4	920.4	908.3	896.3	865.6	831.7	795.5	754.5	709.6	661.4
45°	984.4	964.7	940.1	926.4	913.2	879.8	843.2	802.6	759.4	711.2	660.3
47.5°	1008.0	987.2	960.3	945.5	929.7	894.1	854.1	810.3	763.8	711.8	659.2
50°	1032.1	1009.6	980.6	964.2	947.7	907.8	865.1	816.9	766.5	712.3	656.5
52.5°	1055.6	1031.5	1000.3	982.8	963.6	921.5	875.5	823.5	768.7	711.8	652.6
55°	1076.9	1051.8	1018.9	1000.3	978.9	934.0	884.8	828.9	769.8	710.1	647.7
57.5°	1096.7	1070.9	1036.4	1015.6	994.8	946.1	893.5	834.9	770.9	707.4	642.2
60°	1112.0	1086.3	1050.1	1029.3	1006.9	955.9	900.6	838.2	770.9	703.5	635.1
62.5°	1123.5	1097.8	1061.6	1039.7	1016.2	964.2	906.1	841.5	770.9	699.7	628.0
65°	1130.6	1105.4	1068.2	1046.3	1022.2	968.0	908.9	842.1	768.7	694.2	619.2
67.5°	1131.7	1106.5	1069.3	1047.9	1023.3	968.0	907.2	839.3	764.3	687.1	609.4
70°	1126.8	1101.6	1064.9	1043.0	1018.9	963.1	901.2	832.8	756.7	677.8	597.9
72.5°	1114.2	1088.4	1052.9	1030.4	1006.9	951.6	888.6	820.7	744.1	664.7	584.2
75°	1092.3	1067.1	1032.1	1011.2	987.2	933.0	869.4	803.2	726.5	648.2	567.2
77.5°	1063.3	1038.6	1004.1	983.3	960.9	907.8	845.4	779.7	705.2	628.0	547.5
80°	1028.8	1005.2	971.3	951.0	929.1	877.7	816.3	752.3	678.9	603.9	525.6
82.5°	992.1	969.1	936.2	915.4	894.6	844.8	786.2	722.7	651.0	578.2	502.1
85°	956.5	931.9	899.0	879.8	859.0	810.3	755.0	692.0	622.5	551.9	479.1
87.5°	919.3	895.2	862.9	844.8	825.1	775.8	723.3	661.9	595.7	528.3	456.6
90°	885.3	861.8	830.6	812.5	793.9	746.3	694.8	636.8	572.7	507.5	438.0
92.5°	854.1	832.2	802.6	785.1	767.1	721.6	672.3	615.9	554.1	491.1	423.2
95°	827.3	805.9	778.6	761.6	743.0	699.7	651.5	596.2	537.1	475.8	409.5
97.5°	800.5	780.2	753.4	736.9	719.4	677.3	630.7	577.6	519.6	458.8	394.8
100°	775.8	756.1	728.7	713.9	697.0	656.5	610.5	558.5	501.5	441.8	378.9
102.5°	751.7	732.0	705.7	691.0	674.5	634.0	589.1	537.7	482.4	424.9	363.5
105°	727.1	707.9	681.6	666.9	650.4	611.0	567.2	517.4	463.2	407.3	347.7
107.5°	700.3	681.6	656.5	641.7	626.3	586.9	544.8	496.0	444.0	389.3	331.2
110°	672.9	654.3	631.3	615.4	600.6	562.3	521.2	474.7	423.8	370.7	314.3



TEST NUMBER: P201291

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

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	644.4	626.3	603.9	589.1	573.8	537.1	497.7	452.8	403.5	351.5	296.7
115°	615.4	597.3	574.9	560.1	546.4	511.4	473.0	430.3	382.7	332.3	279.2
117.5°	583.6	567.8	546.4	533.3	519.0	484.0	448.4	407.3	361.9	312.1	261.2
120°	554.1	538.7	517.9	503.7	491.1	457.7	423.8	383.8	338.9	292.4	242.5
122.5°	522.9	506.4	487.3	475.2	461.5	430.9	398.0	359.7	315.9	269.9	222.3
125°	490.0	474.7	456.1	444.6	432.0	403.0	371.8	333.4	291.8	247.5	201.5
127.5°	456.6	442.4	424.3	413.9	401.9	373.4	343.3	306.1	264.4	222.8	180.1
130°	422.7	408.4	392.0	381.1	369.6	342.7	313.2	276.5	237.1	198.2	159.3
132.5°	387.1	373.4	357.0	347.1	336.7	311.0	280.9	245.3	210.2	175.2	139.1
135°	350.4	337.8	323.0	313.7	303.3	277.0	248.6	216.3	185.1	152.8	119.4
137.5°	314.8	303.3	289.1	279.8	268.3	243.6	218.5	189.4	161.0	130.9	99.6
140°	279.8	269.4	255.7	245.3	235.4	212.4	189.4	163.2	137.4	110.0	82.1
142.5°	246.9	237.6	222.3	212.4	203.1	182.9	162.6	138.0	115.0	90.3	66.2
145°	214.6	206.4	189.4	180.7	173.0	154.9	134.7	114.4	93.6	72.3	51.5
147.5°	183.4	173.6	157.7	150.0	142.9	127.0	110.0	91.4	74.5	55.8	37.8
150°	153.3	141.3	127.6	121.0	115.0	101.3	86.5	71.2	56.4	40.5	26.3
152.5°	122.1	109.5	100.2	93.6	88.1	77.2	65.2	52.0	40.0	27.4	16.4
155°	90.3	81.6	72.8	69.5	64.6	55.3	45.4	35.0	25.2	16.4	9.3
157.5°	62.4	55.8	50.4	47.1	43.3	36.1	27.9	20.3	14.2	8.8	4.4
160°	37.8	33.4	29.6	26.8	24.1	19.2	13.7	9.3	6.0	2.7	1.6
162.5°	17.0	14.2	12.6	11.0	9.3	7.1	4.4	2.2	1.1	0.5	0.5
165°	3.3	2.2	1.6	1.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0
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: P201291

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

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	656.5	656.5	656.5	656.5	656.5	656.5	656.5	656.5
2.5°	656.5	657.0	657.6	657.6	659.2	661.9	665.8	666.3
5°	654.8	655.4	655.4	655.9	657.6	659.7	663.0	663.6
7.5°	652.1	652.1	652.1	652.1	653.2	655.4	658.1	658.7
10°	648.2	647.2	646.6	646.1	646.6	648.8	651.0	651.5
12.5°	643.9	641.1	640.0	639.5	639.5	640.0	642.2	642.2
15°	638.9	634.6	632.9	631.8	629.6	629.6	631.8	631.8
17.5°	634.0	628.0	624.7	622.5	619.2	618.7	619.8	618.7
20°	629.6	620.3	615.9	612.1	607.2	605.5	605.5	603.9
22.5°	625.3	612.7	606.6	601.2	593.5	590.8	589.1	588.0
25°	622.5	604.4	596.8	590.2	579.8	573.8	572.1	570.0
27.5°	622.0	597.9	587.5	579.3	565.0	557.9	553.5	550.8
30°	622.0	591.3	577.6	566.1	548.6	537.7	533.3	532.2
32.5°	621.4	586.4	570.0	555.2	532.7	518.5	511.9	510.3
35°	619.8	581.5	562.3	544.2	516.8	498.8	489.5	487.3
37.5°	617.6	575.4	555.2	534.4	500.4	478.5	467.0	463.7
40°	615.4	569.4	546.4	524.0	484.0	457.7	442.9	439.1
42.5°	611.6	562.8	538.7	514.1	468.7	436.9	419.9	413.9
45°	607.7	555.2	529.4	503.2	453.3	415.6	394.2	388.2
47.5°	602.8	547.0	520.1	491.1	439.1	394.8	370.7	363.0
50°	597.3	538.7	509.7	479.6	423.8	374.5	344.9	336.7
52.5°	591.3	529.4	499.3	467.6	408.4	355.3	320.8	310.4
55°	583.6	519.0	487.3	453.9	392.6	335.6	296.2	284.2
57.5°	575.4	508.6	475.8	441.3	376.7	317.0	272.1	258.4
60°	565.6	496.6	461.5	427.1	360.3	297.8	248.0	232.1
62.5°	555.2	484.5	449.0	412.3	343.8	279.2	224.5	206.4
65°	544.2	470.9	434.7	396.9	326.3	259.5	201.5	180.7
67.5°	531.1	456.1	418.8	380.5	308.2	239.8	179.0	155.5
70°	517.9	440.2	401.3	363.0	289.6	220.1	157.7	130.9
72.5°	502.1	423.2	383.8	344.9	270.5	200.9	136.9	106.2
75°	484.5	405.7	365.7	326.3	250.8	180.7	116.1	82.1
77.5°	465.9	386.5	347.1	307.2	232.1	161.5	96.9	61.9
80°	446.2	366.3	327.4	287.4	212.4	142.4	78.3	42.7
82.5°	424.3	346.6	307.7	267.7	193.8	123.7	61.3	26.3
85°	403.5	326.9	289.1	249.7	175.7	105.1	46.0	13.1
87.5°	383.3	308.8	272.1	233.2	160.4	90.9	33.4	3.8
90°	366.8	294.0	257.9	220.1	148.4	80.5	25.2	0.0
92.5°	353.7	282.5	246.9	210.2	139.6	73.4	21.4	0.0
95°	341.1	270.5	236.5	199.8	130.9	67.3	17.0	0.0
97.5°	327.4	259.0	225.0	189.4	122.1	60.8	13.7	0.0
100°	313.7	246.4	213.5	179.0	112.2	54.2	9.9	0.0
102.5°	298.9	233.2	200.9	167.5	103.5	47.1	6.6	0.0
105°	284.7	220.1	188.9	156.0	94.2	41.1	4.4	0.0
107.5°	269.4	207.0	176.3	145.1	84.9	34.5	2.7	0.0
110°	254.0	193.8	163.7	133.6	76.1	28.5	2.2	0.0



TEST NUMBER: P201291

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

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	238.7	180.1	151.1	121.5	67.3	23.0	1.6	0.5
115°	222.3	165.9	138.0	109.5	58.6	18.1	1.6	0.5
117.5°	205.9	151.1	125.4	98.0	50.4	13.7	1.1	0.5
120°	188.9	138.0	111.7	87.1	42.7	9.9	1.1	0.5
122.5°	172.5	124.3	99.1	75.6	35.0	7.7	1.1	0.5
125°	155.5	108.4	86.5	65.2	27.9	6.0	1.1	0.5
127.5°	137.4	93.6	73.4	53.7	21.4	4.4	1.1	0.5
130°	118.8	78.8	60.8	43.8	15.3	3.3	1.1	0.5
132.5°	101.3	66.2	49.3	34.5	11.0	2.7	1.1	0.5
135°	85.4	53.7	38.9	25.7	7.7	2.2	0.5	0.5
137.5°	70.1	42.7	29.6	18.6	5.5	1.6	1.1	0.5
140°	56.4	32.3	21.4	13.1	3.8	1.1	1.1	0.5
142.5°	43.8	23.0	14.8	8.8	2.7	1.1	0.5	0.5
145°	32.3	15.3	9.9	5.5	2.2	1.1	1.1	1.1
147.5°	21.9	10.4	6.0	3.8	1.6	1.1	1.1	0.5
150°	14.2	6.6	3.8	2.7	1.1	1.1	1.1	0.5
152.5°	8.8	3.8	2.2	1.6	1.1	1.1	1.1	0.5
155°	4.4	2.2	1.6	1.1	1.1	1.1	1.1	1.1
157.5°	2.2	1.6	1.1	1.1	1.1	1.1	1.1	1.1
160°	1.1	1.1	0.5	0.5	1.1	1.1	1.1	1.1
162.5°	0.5	0.5	0.5	0.5	1.1	1.1	1.1	1.1
165°	0.0	0.5	0.5	0.5	1.1	1.1	1.1	1.1
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)