Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

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: FAIL-SAFE

Report Number: P188225

Luminaire Tested: **MPBL-3-LD4-UNV-1DN-LO-40**

Issue Date: 3/3/2020

Report Generated By E9911574 / USPTCWHP6081592

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Peachtree City, GA 30269

Test Information

Test Method:	LM-79-08
Report Number:	P188225
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P27362)
Test Lab:	INNOVATION CENTER-P2
Issue Date:	3/3/2020
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	FAIL-SAFE
Catalog Number:	MPBL-3-LD4-UNV-1DN-LO-40
Description:	
Light Source:	(84) NICHIA ELM 4000K LED
	2UT217042A8404A
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	2082.2 lumens
Efficiency:	N/A
Efficacy:	80.2 lumens/watt
Spacing Criteria (0/90/45):	1.33 / 1.18 / 1.39
Luminous Opening:	Rectangular w/ Sides (W: 3' x L: 0.42' x H: 0.29')
CIE Type:	Direct

Input Watts (W):	25.95
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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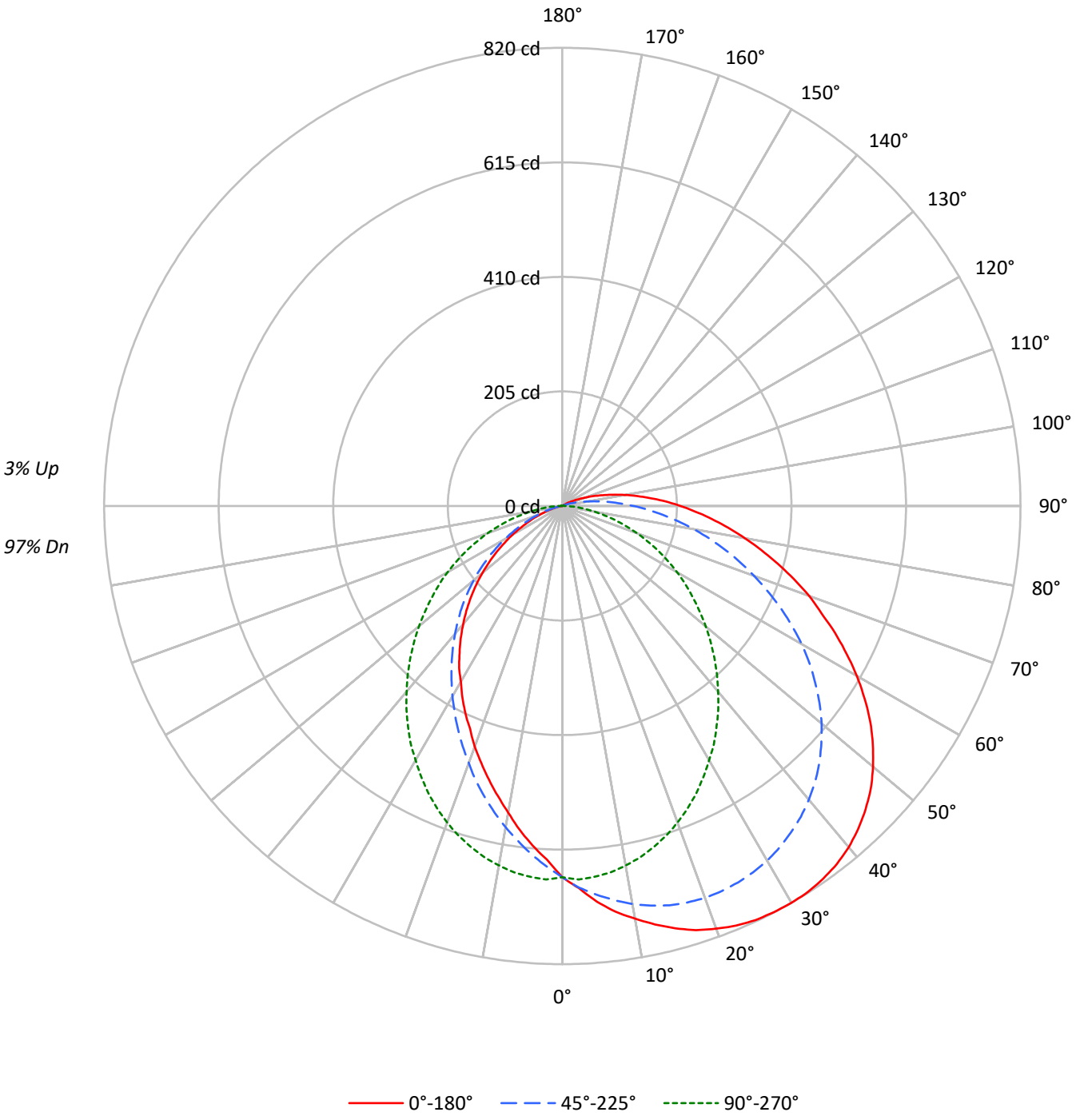
Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20			20			20			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	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	97
1	107	101	97	92	104	99	94	90	94	90	87	89	86	84	85	83	81	78
2	97	88	80	74	94	86	79	73	81	76	71	78	73	69	74	70	67	64
3	88	77	68	61	85	75	67	61	71	65	59	68	62	58	65	60	56	54
4	80	68	59	52	78	66	58	51	63	56	50	61	54	49	58	53	48	46
5	74	61	51	44	71	59	51	44	57	49	43	54	48	42	52	46	42	39
6	68	54	45	39	66	53	45	38	51	43	38	49	42	37	47	41	37	34
7	63	49	40	34	61	48	40	34	46	39	33	45	38	33	43	37	32	30
8	59	45	36	30	57	44	36	30	42	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	33	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	25	50	37	30	25	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	5720	5720	5720
5°	5790	5709	4969
10°	5838	5617	4338
15°	5876	5489	3808
20°	5879	5334	3348
25°	5857	5155	2938
30°	5807	4947	2571
35°	5743	4737	2262
40°	5645	4506	1955
45°	5499	4270	1657
50°	5302	4024	1363
55°	5051	3757	1074
60°	4738	3498	799
65°	4389	3187	546
70°	4046	2820	322
75°	3677	2388	161
80°	3308	1873	60
85°	2949	1273	26

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.9	3.0
10°-20°	180.0	8.6
20°-30°	272.3	13.1
30°-40°	329.5	15.8
40°-50°	344.5	16.5
50°-60°	314.6	15.1
60°-70°	247.9	11.9
70°-80°	166.6	8.0
80°-90°	95.0	4.6
90°-100°	45.7	2.2
100°-110°	17.4	0.8
110°-120°	4.9	0.2
120°-130°	1.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	515.2	24.7
0°-40°	844.7	40.6
0°-60°	1503.8	72.2
0°-90°	2013.3	96.7
90°-120°	67.9	3.3
90°-150°	68.9	3.3
90°-180°	69.0	3.3
0°-180°	2082.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	664	664	664	664	664	
5°	711	698	666	626	610	69
15°	783	740	632	539	507	222
25°	818	743	567	442	410	378
35°	814	713	481	345	321	510
45°	768	650	385	254	231	592
55°	673	553	285	162	143	601
65°	539	431	189	80	67	534
75°	399	301	98	23	18	422
85°	269	180	27	3	2	232
90°	211	127	2	2	1	116
95°	159	83	2	1	1	121
105°	75	23	2	1	0	81
115°	23	3	2	1	0	24
125°	2	1	2	1	1	3
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	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°	664.3	664.3	664.3	664.3	664.3	664.3	664.3	664.3	664.3	664.3	664.3
2.5°	684.8	683.0	684.2	683.6	686.6	687.9	688.5	687.9	688.5	686.0	683.6
5°	710.8	707.8	708.4	707.8	707.8	707.2	707.8	706.6	706.0	701.7	698.1
7.5°	732.5	730.1	729.5	727.7	728.3	727.1	726.5	724.7	722.3	716.2	711.4
10°	750.1	748.2	748.2	745.8	745.8	744.6	744.0	740.4	737.4	730.1	723.5
12.5°	767.0	765.8	763.9	762.1	760.9	759.7	757.9	754.3	749.5	741.0	732.5
15°	782.7	781.5	780.3	777.2	775.4	773.0	771.8	766.4	759.7	749.5	739.8
17.5°	796.0	794.7	793.5	789.9	786.3	783.9	781.5	775.4	767.6	756.1	744.0
20°	805.0	804.4	802.6	798.4	794.1	791.1	788.7	782.1	772.4	759.7	746.4
22.5°	812.9	811.7	809.2	805.0	799.0	796.0	792.9	785.1	774.2	760.3	745.8
25°	817.7	815.9	813.5	808.6	802.0	799.0	795.4	786.3	774.2	759.7	743.4
27.5°	819.5	818.3	815.3	810.5	803.8	800.2	796.0	786.3	773.0	757.3	739.2
30°	820.1	818.9	815.3	809.8	802.6	798.4	794.1	783.3	768.8	751.9	733.1
32.5°	818.9	817.1	813.5	807.4	799.0	794.7	789.9	777.8	761.5	744.0	724.1
35°	814.1	812.9	808.0	802.0	792.9	788.1	782.7	770.0	753.1	735.0	713.2
37.5°	807.4	805.6	801.4	794.7	785.7	779.7	773.6	760.3	742.8	723.5	701.1
40°	797.2	795.4	791.1	783.9	774.2	768.2	761.5	747.6	729.5	709.6	686.0
42.5°	783.9	783.3	777.8	771.2	760.3	754.3	747.6	733.1	713.2	693.9	669.7
45°	767.6	767.0	760.9	754.9	744.0	737.4	730.1	715.0	695.1	675.2	650.4
47.5°	748.9	747.6	741.6	735.0	724.7	717.4	710.8	695.1	675.2	654.0	628.7
50°	725.9	725.3	719.9	712.0	702.3	695.1	687.9	670.9	651.0	631.1	605.7
52.5°	700.5	700.5	693.9	687.3	677.0	669.7	662.5	645.6	626.9	605.7	580.4
55°	672.8	672.2	666.1	659.5	649.2	642.0	634.7	618.4	599.7	577.9	552.6
57.5°	641.4	641.4	634.7	628.7	619.0	611.8	604.5	588.2	568.3	549.0	524.8
60°	608.7	608.7	602.1	596.7	587.0	579.8	572.5	556.8	536.9	518.2	494.6
62.5°	573.7	573.7	567.7	562.2	553.2	545.3	539.3	523.6	505.5	485.5	462.6
65°	538.7	538.7	532.7	527.8	518.2	511.5	504.9	490.4	472.9	452.3	430.6
67.5°	501.9	502.5	496.4	491.6	482.5	475.9	469.8	455.3	436.6	418.5	397.4
70°	469.8	466.2	461.4	456.6	447.5	440.9	434.8	421.5	403.4	385.9	364.8
72.5°	434.2	430.6	424.6	422.1	412.5	408.2	401.6	388.3	370.2	352.1	332.8
75°	399.2	395.6	390.7	385.9	378.0	373.8	367.8	355.1	337.6	320.1	300.7
77.5°	364.8	361.7	356.3	353.3	343.6	340.0	334.0	321.3	304.4	287.5	269.3
80°	331.5	328.5	323.1	320.1	311.0	306.8	301.4	288.7	272.4	256.1	238.5
82.5°	299.5	296.5	291.1	288.1	279.0	274.8	269.3	257.3	241.0	225.3	208.3
85°	268.7	266.3	261.5	256.7	248.8	244.6	239.1	227.1	212.0	196.3	180.0
87.5°	239.1	236.1	231.3	228.3	219.2	215.0	210.2	198.1	183.0	169.7	152.8
90°	211.4	209.0	203.5	199.3	192.0	187.2	182.4	170.9	156.4	142.5	127.4
92.5°	184.8	182.4	177.6	173.3	166.1	163.1	157.0	145.5	131.7	118.4	103.9
95°	159.4	157.6	152.2	148.0	140.7	138.3	132.9	121.4	108.7	96.6	82.7
97.5°	135.3	134.1	129.2	125.0	117.8	115.3	110.5	99.6	87.6	76.7	64.0
100°	113.5	111.7	107.5	103.3	97.2	94.2	90.0	80.3	68.8	58.6	47.1
102.5°	93.0	91.8	88.2	83.9	79.1	75.5	71.3	62.2	52.5	43.5	33.8
105°	74.9	73.7	69.4	66.4	61.0	59.2	55.6	47.7	38.7	30.8	22.9
107.5°	58.6	57.4	54.4	50.7	46.5	44.7	41.1	35.0	27.2	21.1	15.1
110°	44.1	42.9	41.1	38.7	33.8	32.6	30.2	24.8	18.7	13.9	9.7

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	*32.6*	31.4	29.6	27.8	24.2	22.9	20.5	16.9	12.1	9.1	5.4
115°	*22.9*	21.7	20.5	19.3	16.3	15.1	13.9	10.9	7.9	5.4	3.0
117.5°	*15.1*	14.5	13.3	12.7	10.9	9.7	8.5	6.6	4.2	3.0	1.8
120°	*9.7*	9.1	8.5	7.2	6.0	5.4	4.8	3.6	1.8	1.2	1.2
122.5°	*5.4*	4.8	4.8	4.2	3.0	2.4	2.4	1.8	0.6	0.6	1.2
125°	*2.4*	2.4	1.8	1.8	1.2	0.6	0.6	0.6	0.6	1.2	1.2
127.5°	*0.0*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	*0.0*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	*0.0*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	*0.0*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	*0.0*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	*0.0*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	*0.0*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	*0.0*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	*0.0*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	*0.0*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	*0.0*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	*0.0*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	*0.0*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	*0.0*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	*0.0*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	*0.0*	0.0	0.0	0.0	0.0	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

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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	664.3	664.3	664.3	664.3	664.3	664.3	664.3	664.3	664.3	664.3	664.3
2.5°	681.8	680.0	676.4	673.4	672.8	671.6	670.3	670.9	670.9	669.1	666.7
5°	695.1	691.5	686.0	680.6	679.4	677.0	674.0	672.2	669.7	666.1	661.9
7.5°	706.6	700.5	693.3	686.0	683.6	680.6	675.2	671.6	666.7	661.3	654.0
10°	716.2	709.0	699.3	689.7	686.0	681.8	674.0	667.9	661.3	653.4	645.0
12.5°	723.5	713.8	702.3	691.5	686.0	680.6	670.9	662.5	653.4	643.8	632.9
15°	728.9	717.4	703.6	690.3	684.2	677.6	665.5	655.2	644.4	631.7	619.6
17.5°	731.9	718.1	703.0	687.3	680.0	672.2	658.3	645.6	632.3	618.4	604.5
20°	732.5	717.4	699.9	682.4	674.0	664.9	649.2	634.1	619.0	602.7	587.0
22.5°	730.1	713.8	695.1	675.2	666.1	655.8	637.7	620.2	603.3	585.8	568.3
25°	726.5	707.8	687.3	666.1	655.8	644.4	625.7	606.3	587.0	567.1	548.4
27.5°	720.5	699.9	678.2	654.6	643.8	631.7	610.6	588.2	568.3	546.5	527.2
30°	*712.6*	*690.3*	*666.7*	*642.6*	*630.5*	*617.2*	*594.2*	*571.3*	*549.0*	*525.4*	*504.9*
32.5°	702.3	679.4	654.0	627.5	615.4	601.5	576.1	552.0	527.8	504.9	482.5
35°	689.7	664.9	638.9	611.2	597.9	584.0	557.4	531.4	505.5	481.3	457.8
37.5°	676.4	650.4	623.2	593.6	580.4	565.3	537.5	509.7	483.1	458.4	434.2
40°	661.3	633.5	605.1	574.9	560.4	544.7	515.7	487.4	459.0	433.6	409.5
42.5°	643.8	615.4	585.8	554.4	539.9	523.6	494.0	464.4	436.0	409.5	384.7
45°	622.6	594.2	564.1	532.0	517.6	500.6	470.4	440.3	410.7	384.7	360.5
47.5°	601.5	571.9	541.1	509.1	493.4	477.1	444.5	415.5	385.9	359.9	336.4
50°	577.9	549.0	517.6	484.3	468.6	452.3	420.3	390.7	361.1	335.2	311.6
52.5°	552.6	523.6	492.2	459.0	442.7	427.6	394.4	365.4	335.2	309.8	286.9
55°	524.8	497.0	464.4	431.8	415.5	401.0	368.4	338.2	309.8	285.0	262.7
57.5°	496.4	468.0	437.2	404.0	388.3	373.2	341.2	312.8	284.4	261.5	238.5
60°	466.8	439.0	408.8	375.6	359.9	346.0	314.0	286.9	259.7	237.3	215.0
62.5°	436.6	408.8	379.3	346.6	331.5	317.7	286.9	260.9	234.3	212.6	190.8
65°	405.2	378.7	347.9	317.7	303.2	289.3	260.3	233.7	210.8	189.0	167.9
67.5°	373.2	347.2	318.3	288.7	274.8	261.5	233.1	209.6	186.0	164.9	144.9
70°	341.2	315.2	288.7	259.7	246.4	233.7	207.1	183.0	161.8	141.9	123.8
72.5°	309.8	285.0	257.9	231.3	218.6	206.5	181.8	158.8	138.3	119.6	102.1
75°	279.0	254.9	229.5	203.5	191.4	180.0	157.0	135.3	115.3	97.8	82.1
77.5°	247.6	225.3	200.5	176.9	165.5	154.0	132.3	111.7	93.6	77.3	62.8
80°	218.0	196.3	173.3	150.4	139.5	129.2	108.7	90.0	73.1	58.6	45.9
82.5°	189.0	168.5	148.0	126.8	115.3	106.3	87.0	70.1	55.0	42.3	30.8
85°	161.2	142.5	122.6	103.3	92.4	83.9	67.0	51.9	38.7	27.2	16.9
87.5°	135.3	117.2	99.0	80.9	72.5	64.0	48.9	35.6	24.2	13.3	4.8
90°	111.1	94.2	77.9	61.6	53.1	46.5	32.6	21.1	10.3	1.8	1.8
92.5°	88.8	73.7	58.6	44.1	37.4	30.2	19.3	9.1	2.4	1.8	1.8
95°	69.4	55.0	41.7	29.6	23.6	18.1	9.1	3.0	1.8	1.8	1.8
97.5°	51.9	39.3	27.8	18.1	13.3	9.7	4.2	1.8	1.8	1.8	1.8
100°	36.8	26.6	17.5	10.3	7.2	4.8	1.8	1.8	1.8	1.8	1.8
102.5°	24.8	16.3	10.3	5.4	3.6	2.4	1.8	1.8	1.8	1.8	1.8
105°	16.3	10.3	6.0	3.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8
107.5°	10.3	6.0	3.0	1.8	1.2	1.8	1.8	1.8	1.8	1.8	1.8
110°	6.0	3.6	1.8	1.2	1.8	1.8	1.8	1.8	1.8	1.8	1.8

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

TEST NUMBER: P188225
CATALOG NUMBER: MPBL-3-LD4-UNV-1DN-LO-40

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	3.6	1.8	1.2	1.2	1.2	1.2	1.8	1.8	1.8	1.8	1.8
115°	1.8	1.2	1.2	1.2	1.8	1.8	1.8	1.8	1.8	1.8	1.8
117.5°	1.2	1.2	1.2	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
120°	1.2	1.2	1.2	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
122.5°	1.2	1.2	1.2	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
125°	1.2	1.2	1.2	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	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

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

TEST NUMBER: P188225
CATALOG NUMBER: MPBL-3-LD4-UNV-1DN-LO-40

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	664.3	664.3	664.3	664.3	664.3	664.3	664.3	664.3	664.3	664.3	664.3
2.5°	663.7	658.9	655.2	653.4	651.6	649.2	648.0	646.8	645.6	645.0	643.8
5°	655.8	649.2	643.8	641.4	638.3	634.1	631.7	628.7	626.3	623.2	621.4
7.5°	647.4	638.3	630.5	626.9	623.8	617.8	613.6	609.3	605.1	601.5	598.5
10°	635.3	625.0	616.0	611.2	607.5	600.3	594.2	588.8	584.0	579.2	575.5
12.5°	622.0	610.0	599.1	594.2	589.4	581.0	574.3	567.7	561.6	555.6	551.4
15°	606.9	593.0	581.0	574.9	570.1	560.4	552.6	544.7	538.7	531.4	527.2
17.5°	589.4	574.9	561.0	555.0	550.2	538.7	530.2	521.8	515.1	507.3	502.5
20°	571.3	555.0	540.5	533.9	527.8	516.3	506.7	497.6	489.8	484.3	477.7
22.5°	551.4	534.5	518.8	512.1	505.5	492.8	483.1	473.5	465.6	459.6	452.9
25°	530.2	512.1	495.8	488.6	481.9	469.2	459.0	448.7	441.5	433.6	428.8
27.5°	507.9	489.2	472.3	465.0	458.4	445.1	434.8	424.6	417.3	410.1	405.2
30°	*484.9*	*465.6*	*448.7*	*441.5*	*434.2*	*420.9*	*410.7*	*400.4*	*393.1*	*386.5*	*381.1*
32.5°	461.4	443.3	425.2	417.3	409.5	397.4	386.5	378.0	369.0	363.0	358.1
35°	437.2	418.5	401.0	393.1	385.3	372.6	362.3	353.9	345.4	339.4	334.6
37.5°	413.1	395.0	376.8	369.0	361.7	349.1	338.8	330.9	322.5	317.1	312.2
40°	388.3	370.2	352.7	344.8	337.0	324.9	314.6	306.8	298.9	293.5	288.7
42.5°	364.2	346.0	328.5	320.7	313.4	301.4	291.1	283.8	275.4	270.6	266.3
45°	339.4	320.7	304.4	296.5	289.3	277.8	267.5	260.3	253.6	247.0	242.8
47.5°	315.2	296.5	280.8	272.4	265.7	254.2	244.0	235.5	230.1	224.7	220.4
50°	291.7	273.0	257.3	248.8	242.8	231.3	221.6	213.2	207.1	201.7	197.5
52.5°	267.5	249.4	233.7	225.9	219.2	207.1	198.7	191.4	184.8	179.4	174.5
55°	244.0	225.9	210.2	202.3	196.3	184.8	175.1	167.9	162.5	157.0	152.2
57.5°	219.8	202.3	187.2	180.6	173.3	161.8	154.0	146.8	140.1	134.7	131.0
60°	196.3	179.4	164.9	157.0	151.0	140.1	132.3	125.6	119.0	114.1	110.5
62.5°	173.3	156.4	141.9	135.9	129.2	119.0	111.1	104.5	99.0	94.8	91.2
65°	151.0	134.7	120.8	114.7	108.7	98.4	90.6	85.2	80.3	76.1	73.7
67.5°	128.6	113.5	100.2	94.8	88.8	79.7	73.1	67.6	62.8	59.8	57.4
70°	108.1	93.6	80.9	75.5	70.1	62.2	56.8	51.3	47.7	44.7	42.9
72.5°	87.0	73.7	62.2	58.0	53.1	46.5	41.1	37.4	34.4	31.4	30.2
75°	68.2	56.2	45.9	42.3	38.0	33.2	28.4	25.4	22.9	21.1	20.5
77.5°	50.7	39.9	31.4	28.4	26.0	21.1	18.7	16.3	14.5	13.3	12.7
80°	35.0	26.0	19.3	16.9	15.1	12.1	10.9	9.7	8.5	7.9	7.9
82.5°	21.1	13.9	10.3	9.1	7.9	6.6	6.0	5.4	4.8	4.8	4.2
85°	9.1	6.0	4.2	4.2	3.6	3.6	3.0	3.0	3.0	2.4	2.4
87.5°	3.0	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	1.8
90°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
92.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.2	1.2
95°	1.8	1.8	1.8	1.8	1.8	1.2	1.2	1.2	1.2	1.2	1.2
97.5°	1.8	1.8	1.8	1.8	1.8	1.2	1.2	1.2	1.2	1.2	0.6
100°	1.8	1.8	1.8	1.8	1.8	1.2	1.2	1.2	1.2	1.2	0.6
102.5°	1.8	1.8	1.8	1.8	1.2	1.2	1.2	1.2	1.2	0.6	0.6
105°	1.8	1.8	1.8	1.8	1.8	1.2	1.2	1.2	1.2	1.2	0.6
107.5°	1.8	1.8	1.8	1.8	1.2	1.2	1.2	1.2	1.2	0.6	0.6
110°	1.8	1.8	1.8	1.8	1.2	1.2	1.2	1.2	1.2	0.6	0.6

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

TEST NUMBER: P188225
CATALOG NUMBER: MPBL-3-LD4-UNV-1DN-LO-40

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	1.8	1.8	1.8	1.2	1.2	1.2	1.2	1.2	1.2	0.6	0.6
115°	1.8	1.8	1.8	1.8	1.8	1.2	1.2	1.2	1.2	1.2	0.6
117.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.2	1.2	1.2	1.2	1.2
120°	1.8	1.8	1.8	1.8	1.8	1.8	1.2	1.2	1.2	1.2	0.6
122.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.2	1.2	1.2	1.2	0.6
125°	1.8	1.8	1.8	1.8	1.8	1.8	1.2	1.2	1.2	1.2	1.2
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	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

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

TEST NUMBER: P188225
CATALOG NUMBER: MPBL-3-LD4-UNV-1DN-LO-40

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	664.3	664.3	664.3	664.3	664.3	664.3	664.3	664.3
2.5°	642.6	640.8	637.7	637.7	635.3	634.1	633.5	633.5
5°	619.0	616.6	613.6	613.0	611.2	610.0	610.0	610.0
7.5°	595.5	592.4	589.4	588.8	586.4	585.2	584.6	584.6
10°	571.3	568.3	564.1	563.5	559.8	558.0	557.4	557.4
12.5°	547.1	542.9	539.3	537.5	534.5	532.0	532.0	532.0
15°	522.4	518.2	515.1	513.3	509.7	507.3	506.7	507.3
17.5°	497.6	493.4	490.4	488.0	484.9	482.5	481.9	482.5
20°	472.9	468.0	465.6	463.2	460.2	457.8	457.2	458.4
22.5°	448.1	442.7	440.9	437.8	435.4	433.6	432.4	431.8
25°	423.9	418.5	416.7	414.3	411.9	410.1	408.8	410.1
27.5°	399.8	395.6	393.8	391.3	388.3	386.5	385.9	387.1
30°	*376.8*	*372.6*	*370.8*	*368.4*	*366.0*	*364.2*	*363.6*	*363.0*
32.5°	353.3	348.5	347.9	346.0	343.6	343.6	341.8	343.6
35°	330.3	326.1	324.9	322.5	321.9	321.3	320.1	320.7
37.5°	307.4	303.8	303.2	300.7	300.7	299.5	298.3	298.9
40°	284.4	280.8	280.2	279.0	277.2	276.6	275.4	276.0
42.5°	262.1	258.5	257.9	257.3	256.1	254.2	253.0	254.2
45°	239.1	235.5	234.9	233.1	232.5	230.7	230.7	231.3
47.5°	216.2	213.2	212.6	211.4	211.4	208.3	208.3	209.0
50°	193.9	190.8	190.2	189.0	186.6	186.6	186.0	186.6
52.5°	170.9	169.1	168.5	166.7	166.7	164.9	164.3	164.9
55°	149.2	147.4	146.8	145.5	144.3	143.7	143.1	143.1
57.5°	129.2	126.2	125.6	124.4	124.4	123.2	122.0	122.6
60°	108.7	106.3	105.7	104.5	103.3	103.3	102.7	102.7
62.5°	88.8	87.6	87.0	85.8	85.8	84.5	83.9	83.9
65°	71.3	69.4	69.4	68.2	67.6	67.0	66.4	67.0
67.5°	55.0	53.7	53.1	53.1	51.9	51.3	50.7	51.3
70°	41.1	39.9	39.3	39.3	38.7	38.0	37.4	37.4
72.5°	29.0	27.8	27.8	28.4	27.2	27.2	26.0	26.0
75°	19.3	18.7	18.7	18.7	18.1	17.5	17.5	17.5
77.5°	12.1	12.1	11.5	12.1	11.5	11.5	10.9	10.9
80°	7.2	6.6	6.6	6.6	6.6	6.6	6.0	6.0
82.5°	4.2	4.2	3.6	3.6	3.6	3.6	3.6	3.6
85°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
87.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
90°	1.8	1.2	1.2	1.2	1.2	1.2	1.2	1.2
92.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
95°	1.2	1.2	1.2	1.2	0.6	0.6	0.6	0.6
97.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
100°	0.6	0.6	0.6	0.6	0.6	0.0	0.0	0.0
102.5°	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0
105°	0.6	0.6	0.6	0.6	0.6	0.0	0.0	0.0
107.5°	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0
110°	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0

TEST NUMBER: P188225
CATALOG NUMBER: MPBL-3-LD4-UNV-1DN-LO-40

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0
115°	0.6	0.6	0.6	0.6	0.6	0.0	0.0	0.0
117.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.0	0.0
120°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.0
122.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.0
125°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	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
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)