

Classified
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: P837776

Luminaire Tested: **ORLG-12-4-INS-ASY2R-LD4-1LO-27-120-EDD-90**

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-08
Report Number: P837776
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2R-LD4-1LO-27-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and RFI grid
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

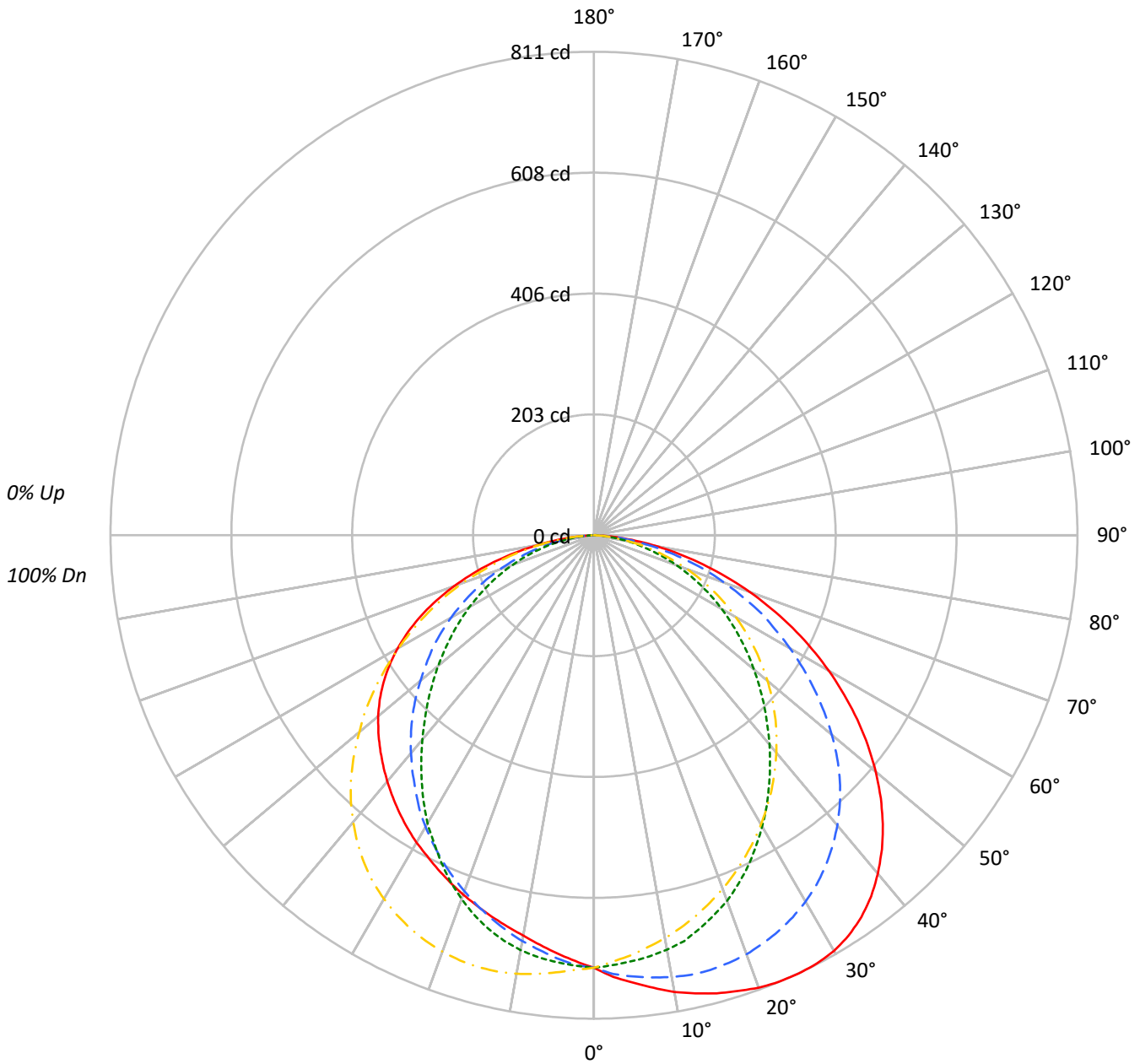
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2128.7 lumens
Efficiency: N/A
Efficacy: 91.0 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
Input Voltage (V): 120
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

TEST NUMBER: P837776
CATALOG NUMBER: ORLG-12-4-INS-ASY2R-LD4-1LO-27-120-EDD-90

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	
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	79	71	65	88	78	70	64	75	68	63	72	66	62	69	65	61	59
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	1953	1953	1953	1953
5°	2035	1938	1902	1942
10°	2126	1929	1863	1931
15°	2216	1904	1845	1904
20°	2313	1869	1837	1859
25°	2409	1817	1837	1798
30°	2502	1754	1849	1734
35°	2569	1682	1868	1655
40°	2603	1610	1894	1573
45°	2608	1536	1930	1498
50°	2583	1466	1978	1427
55°	2530	1401	2022	1362
60°	2450	1333	2048	1298
65°	2341	1254	2038	1225
70°	2186	1163	1965	1141
75°	1967	1037	1804	1031
80°	1667	868	1516	882
85°	1161	574	960	590

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Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.9	3.2
10°-20°	199.5	9.4
20°-30°	305.7	14.4
30°-40°	371.7	17.5
40°-50°	386.4	18.2
50°-60°	349.1	16.4
60°-70°	265.4	12.5
70°-80°	147.9	7.0
80°-90°	34.1	1.6
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	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°	574.1	27.0
0°-40°	945.8	44.4
0°-60°	1681.3	79.0
0°-90°	2128.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2128.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	726	726	726	726	726	
5°	753	718	704	719	753	73
15°	796	683	662	684	796	226
25°	811	612	619	606	811	375
35°	782	512	568	504	782	488
45°	685	404	507	394	685	528
55°	539	299	431	290	539	481
65°	368	197	320	192	368	363
75°	189	100	174	99	189	201
85°	38	19	31	19	38	47
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	725.6	725.6	725.6	725.6	725.6	725.6	725.6	725.6	725.6	725.6	725.6
2.5°	741.6	730.8	731.0	740.5	733.2	736.7	726.6	730.5	729.3	730.1	721.8
5°	753.3	741.6	741.5	749.6	741.5	743.0	730.1	732.7	728.9	726.6	717.6
7.5°	765.7	754.0	752.8	759.9	749.3	748.1	733.9	733.9	727.1	721.2	712.7
10°	777.9	765.8	764.3	769.7	756.5	752.6	735.4	732.7	723.7	714.9	705.8
12.5°	787.0	774.8	773.6	777.0	762.1	755.0	735.4	730.1	716.9	704.6	697.5
15°	795.6	783.1	779.9	781.6	764.5	755.0	733.0	724.9	708.0	691.7	683.4
17.5°	801.7	789.7	786.5	786.3	765.7	752.1	727.9	716.8	696.4	676.8	668.5
20°	807.8	795.8	791.7	788.7	765.3	748.2	720.5	705.4	681.7	659.7	652.8
22.5°	810.9	798.5	794.1	789.5	763.1	741.1	711.3	692.2	665.1	638.9	633.2
25°	811.4	798.7	793.9	787.3	758.7	732.7	699.5	676.3	646.0	616.9	612.0
27.5°	810.0	796.1	791.4	783.4	752.1	722.3	685.4	658.2	625.7	593.5	588.3
30°	805.3	791.2	786.7	776.3	742.8	709.7	670.0	638.1	603.2	569.0	564.4
32.5°	795.8	782.1	778.4	768.0	732.7	694.9	652.1	616.4	578.3	545.7	538.9
35°	781.9	768.2	765.8	755.0	718.5	677.3	632.5	592.7	551.9	518.6	512.0
37.5°	763.8	752.3	748.7	738.1	701.7	657.4	610.0	567.0	525.0	489.1	485.1
40°	741.0	730.1	727.4	717.9	682.2	635.2	585.6	540.4	497.2	463.9	458.2
42.5°	714.9	704.7	703.2	693.4	658.2	610.6	559.2	512.8	468.3	436.1	430.4
45°	685.3	675.5	675.1	665.8	632.0	583.4	531.4	484.9	440.0	406.7	403.7
47.5°	652.6	643.8	643.8	635.2	602.7	553.4	502.8	455.8	411.6	382.2	376.7
50°	617.1	608.8	606.2	602.0	570.4	520.8	472.7	427.3	383.5	355.4	350.2
52.5°	579.2	572.1	573.7	566.0	535.3	486.8	442.2	395.4	355.2	329.7	324.4
55°	539.2	529.1	530.6	527.7	498.8	451.7	408.1	369.0	327.5	303.5	298.6
57.5°	497.8	484.6	490.0	488.3	459.8	415.8	376.7	339.0	299.9	277.7	273.0
60°	455.3	442.6	448.2	446.6	419.9	380.0	344.4	309.4	272.5	252.3	247.6
62.5°	411.6	399.9	405.0	403.8	379.3	343.2	312.3	280.1	244.9	226.8	222.4
65°	367.6	356.4	361.0	360.2	337.5	310.1	279.3	249.8	217.1	201.4	197.0
67.5°	322.6	312.3	316.5	316.5	295.7	269.4	246.1	219.2	189.9	176.4	172.3
70°	277.9	268.3	272.0	271.6	254.0	232.7	212.6	188.5	162.3	151.1	147.8
72.5°	232.9	224.4	227.8	227.5	212.7	199.0	179.1	158.2	135.4	126.4	123.4
75°	189.2	181.3	184.5	184.1	172.1	159.3	145.9	128.6	109.0	102.7	99.7
77.5°	147.6	139.5	142.2	142.2	133.4	124.1	113.4	100.0	86.1	79.4	77.2
80°	107.6	103.7	102.4	102.6	96.6	90.5	85.1	72.3	62.1	57.5	56.0
82.5°	70.7	67.5	66.2	66.5	63.1	59.4	56.0	47.1	40.3	37.6	36.7
85°	37.6	35.2	34.0	34.9	34.2	32.2	30.5	24.4	20.1	19.1	18.6
87.5°	11.8	10.3	9.5	12.5	10.7	9.5	9.1	7.3	5.6	5.6	5.4
90°	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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	725.6	725.6	725.6	725.6	725.6	725.6	725.6	725.6	725.6	725.6	725.6
2.5°	724.5	724.5	717.9	716.4	715.7	716.6	710.0	708.8	718.3	715.1	707.8
5°	718.8	718.5	709.1	707.5	707.5	706.4	699.0	697.3	706.8	704.1	696.1
7.5°	711.7	710.7	699.7	698.5	696.8	696.1	687.8	686.6	694.8	693.1	685.6
10°	703.1	702.0	689.0	688.2	686.3	684.9	677.2	676.3	684.6	681.9	676.0
12.5°	691.7	689.8	676.5	675.6	674.1	673.6	666.0	665.6	674.8	672.1	665.8
15°	676.8	675.3	660.4	660.7	660.9	660.9	654.8	654.5	663.4	662.3	655.5
17.5°	660.4	658.4	644.2	645.2	646.4	647.7	643.0	643.8	653.3	651.8	645.7
20°	641.8	639.8	625.9	628.8	631.3	634.0	631.0	633.3	642.1	641.4	636.9
22.5°	621.0	618.9	606.1	610.5	614.7	619.8	618.4	621.1	630.4	630.3	626.2
25°	595.6	596.1	584.7	590.2	597.3	604.4	604.9	609.3	619.6	618.6	614.9
27.5°	571.9	572.6	560.5	569.7	579.2	588.3	590.5	596.6	607.1	606.2	603.0
30°	547.0	547.9	536.2	548.7	560.2	571.4	576.1	584.4	595.1	595.1	591.7
32.5°	521.1	522.6	510.4	527.2	540.6	553.6	561.9	570.5	582.7	582.4	579.5
35°	494.5	496.2	485.1	506.4	519.8	535.7	546.0	557.5	568.3	568.5	566.3
37.5°	467.5	469.5	459.3	482.7	497.9	516.7	529.9	541.4	553.4	554.1	552.1
40°	440.5	442.7	433.9	456.5	475.8	496.7	512.0	525.5	538.7	539.1	537.7
42.5°	413.6	416.0	409.4	431.4	453.2	475.8	493.7	509.1	522.6	523.5	522.0
45°	387.4	389.4	384.7	408.7	429.7	454.3	474.9	492.3	506.0	507.2	506.7
47.5°	361.3	363.2	359.0	381.0	405.2	431.2	455.1	474.4	489.0	490.3	490.0
50°	335.8	337.3	332.7	355.8	379.8	407.5	432.4	454.8	471.0	472.4	472.2
52.5°	310.4	311.9	308.0	332.2	354.1	383.3	410.4	434.6	450.7	452.7	453.1
55°	285.9	286.5	283.5	306.7	327.8	358.5	389.6	413.1	429.2	430.9	431.9
57.5°	261.3	261.5	258.9	281.1	301.4	332.7	365.4	390.1	405.3	407.0	408.6
60°	236.9	236.8	233.9	255.4	274.9	305.8	339.8	364.4	379.1	380.6	382.7
62.5°	212.7	212.2	209.7	229.5	247.8	278.4	312.6	336.3	350.3	351.4	354.1
65°	188.7	188.2	185.8	204.1	220.7	250.0	283.5	306.0	318.7	320.0	319.5
67.5°	165.0	164.0	162.1	178.6	193.6	220.7	252.9	274.3	284.8	286.0	289.2
70°	141.3	140.1	135.9	153.3	166.5	190.7	220.7	239.8	248.6	249.8	249.3
72.5°	118.0	116.8	112.2	128.3	139.5	160.6	187.4	203.3	210.9	211.9	211.9
75°	95.3	94.6	91.7	103.9	113.2	130.5	153.2	166.4	172.3	173.5	173.1
77.5°	73.5	72.9	70.1	80.6	87.8	100.7	119.0	129.3	133.7	135.1	137.9
80°	52.6	52.5	47.9	58.2	61.4	72.3	85.6	93.6	96.0	97.8	99.9
82.5°	33.7	33.8	29.3	38.1	39.4	46.4	54.7	59.6	61.3	62.8	64.3
85°	16.4	17.1	14.6	20.1	20.3	23.9	27.4	29.3	30.0	31.1	32.5
87.5°	4.2	4.9	2.7	5.8	5.1	6.6	7.6	8.1	8.0	8.8	9.3
90°	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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	725.6	725.6	725.6	725.6	725.6	725.6	725.6	725.6	725.6	725.6	725.6
2.5°	710.2	715.6	712.9	721.7	725.1	719.6	729.1	729.3	722.5	730.5	734.9
5°	699.2	704.7	703.1	712.2	716.4	711.7	723.2	725.4	718.8	727.8	734.9
7.5°	688.0	694.6	692.4	701.7	706.8	703.1	715.4	719.0	713.9	723.7	733.2
10°	678.3	683.9	681.6	691.4	695.8	692.7	704.9	711.5	706.8	718.8	730.1
12.5°	668.9	673.4	670.7	678.8	683.1	679.2	694.1	700.2	696.8	709.3	723.9
15°	656.7	661.8	658.0	665.3	668.5	665.1	677.3	687.8	683.6	697.3	713.4
17.5°	647.4	650.2	645.2	650.9	652.8	648.2	660.6	670.9	667.8	682.7	701.4
20°	637.0	639.4	632.3	635.5	635.4	629.6	640.9	651.1	649.1	665.5	686.6
22.5°	625.5	626.7	618.4	619.1	618.8	609.3	619.4	629.8	628.9	645.5	669.2
25°	613.3	613.5	602.9	602.5	598.8	587.6	596.6	608.3	605.7	623.7	648.6
27.5°	601.3	599.6	586.8	583.7	577.8	564.4	572.4	582.9	581.4	599.0	626.6
30°	588.5	586.3	570.5	564.9	556.3	540.9	547.5	557.3	558.2	573.6	602.5
32.5°	576.3	570.7	553.3	545.1	534.3	516.4	519.9	529.9	531.3	546.8	576.6
35°	560.5	556.8	535.3	521.4	510.8	491.2	494.9	501.8	503.8	519.1	549.4
37.5°	545.7	539.7	516.9	500.0	486.2	465.6	466.6	473.7	475.8	491.2	521.1
40°	530.2	521.8	497.2	477.4	461.7	440.0	438.9	446.3	447.8	462.9	490.0
42.5°	513.8	503.7	476.1	454.4	436.3	414.3	411.9	418.4	420.1	434.8	461.4
45°	497.2	485.1	454.4	430.7	410.9	388.4	386.1	391.0	393.5	407.4	432.9
47.5°	479.6	465.4	432.1	405.7	385.2	362.7	359.8	364.7	366.8	380.5	404.7
50°	461.2	443.9	409.1	380.0	359.6	337.5	333.2	339.0	340.9	353.7	377.4
52.5°	440.9	421.8	384.5	354.1	333.8	312.6	307.5	313.1	315.3	327.8	349.7
55°	419.4	398.7	359.8	330.2	308.2	287.6	283.3	285.5	290.3	302.1	322.4
57.5°	395.2	374.7	333.8	303.6	282.5	262.7	259.1	261.1	265.5	277.1	295.3
60°	369.5	347.8	307.2	277.1	256.6	237.8	234.6	236.4	241.2	251.7	268.6
62.5°	344.1	319.7	279.8	249.8	231.2	213.8	212.9	212.2	216.6	226.8	241.7
65°	313.3	289.9	251.2	222.7	205.8	190.1	186.7	188.2	192.4	201.7	217.3
67.5°	280.3	259.1	221.9	195.6	180.6	166.5	163.7	164.3	168.7	176.9	190.4
70°	245.2	226.6	191.9	168.4	155.7	142.5	140.6	140.8	145.0	152.2	164.0
72.5°	208.5	191.8	161.6	141.5	131.0	121.5	119.8	117.8	121.7	127.8	137.9
75°	171.1	156.4	131.5	115.1	106.8	98.8	97.3	95.3	99.2	104.4	112.4
77.5°	133.4	121.5	102.2	89.5	83.1	77.2	75.8	73.6	77.5	81.4	87.7
80°	96.5	87.8	76.3	63.0	60.8	56.9	55.5	53.1	56.9	59.4	64.1
82.5°	62.3	56.5	49.9	40.6	40.3	37.4	36.7	34.0	37.4	38.9	42.5
85°	31.5	28.8	27.1	20.6	21.3	19.5	19.3	16.4	19.1	19.8	21.8
87.5°	9.0	9.5	8.5	5.1	6.4	6.1	6.1	4.4	6.1	6.1	6.9
90°	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



TEST NUMBER: P837776

CATALOG NUMBER: ORLG-12-4-INS-ASY2R-LD4-1LO-27-120-EDD-90

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	725.6	725.6	725.6	725.6	725.6	725.6	725.6	725.6
2.5°	726.2	729.1	729.8	729.6	731.5	741.6	738.3	741.6
5°	727.9	734.4	736.1	738.4	741.5	753.0	749.3	753.3
7.5°	728.9	738.6	742.3	746.9	751.8	764.7	761.6	765.7
10°	728.9	741.5	746.9	754.5	761.1	776.0	773.1	777.9
12.5°	725.9	742.0	749.6	760.3	768.7	784.8	783.6	787.0
15°	719.6	739.4	749.9	763.6	774.1	792.1	791.6	795.6
17.5°	711.2	735.0	747.7	765.0	778.2	798.3	799.5	801.7
20°	700.5	726.7	743.3	764.5	781.1	803.2	804.8	807.8
22.5°	686.5	716.8	736.7	762.3	781.4	805.3	808.0	810.9
25°	669.9	704.7	728.1	758.1	779.7	805.1	808.8	811.4
27.5°	650.9	689.2	717.1	751.3	775.0	802.4	807.0	810.0
30°	628.9	672.6	704.6	742.5	768.5	797.3	802.2	805.3
32.5°	606.2	654.3	689.7	731.1	759.2	789.2	793.4	795.8
35°	581.5	632.1	671.7	716.6	747.2	776.2	779.4	781.9
37.5°	554.6	608.1	651.3	700.2	730.3	758.1	760.9	763.8
40°	526.9	582.9	628.2	680.0	710.2	735.9	738.9	741.0
42.5°	498.9	555.0	603.7	656.3	686.3	711.0	712.9	714.9
45°	470.7	526.0	576.1	630.1	659.7	682.9	683.6	685.3
47.5°	441.9	496.1	545.8	600.1	629.4	650.6	651.3	652.6
50°	413.0	466.1	513.5	567.8	596.4	618.8	615.7	617.1
52.5°	384.5	434.6	483.0	533.0	561.2	581.0	581.9	579.2
55°	356.6	403.8	448.3	496.4	523.3	538.7	538.2	539.2
57.5°	328.3	372.7	413.5	457.5	483.7	498.3	501.3	497.8
60°	299.6	341.2	377.8	417.5	442.9	455.1	458.7	455.3
62.5°	271.0	309.2	342.4	377.1	400.6	415.7	415.3	411.6
65°	242.4	277.1	306.7	336.1	356.6	371.7	371.0	367.6
67.5°	216.0	244.6	271.1	295.0	312.8	323.1	326.6	322.6
70°	186.8	211.6	234.9	254.0	268.8	278.1	281.5	277.9
72.5°	157.7	178.7	195.1	213.6	224.9	232.7	236.3	232.9
75°	129.0	146.2	159.6	174.0	181.9	188.5	192.6	189.2
77.5°	101.0	114.4	125.1	135.6	144.7	146.2	149.8	147.6
80°	74.5	84.1	91.9	98.8	105.4	106.1	109.0	107.6
82.5°	49.6	56.0	58.1	65.3	69.6	68.9	71.8	70.7
85°	26.2	30.1	33.7	35.9	38.2	36.0	38.6	37.6
87.5°	8.8	9.3	8.1	11.5	12.7	10.8	12.4	11.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)