

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: P837785

Luminaire Tested: **ORLG-12-4-INS-ASY2R-LD4-1LO-30-120-EDD-90**

Issue Date: 5/21/2024

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**Test Information**

Test Method: LM-79-08
Report Number: P837785
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-30-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and RFI grid
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

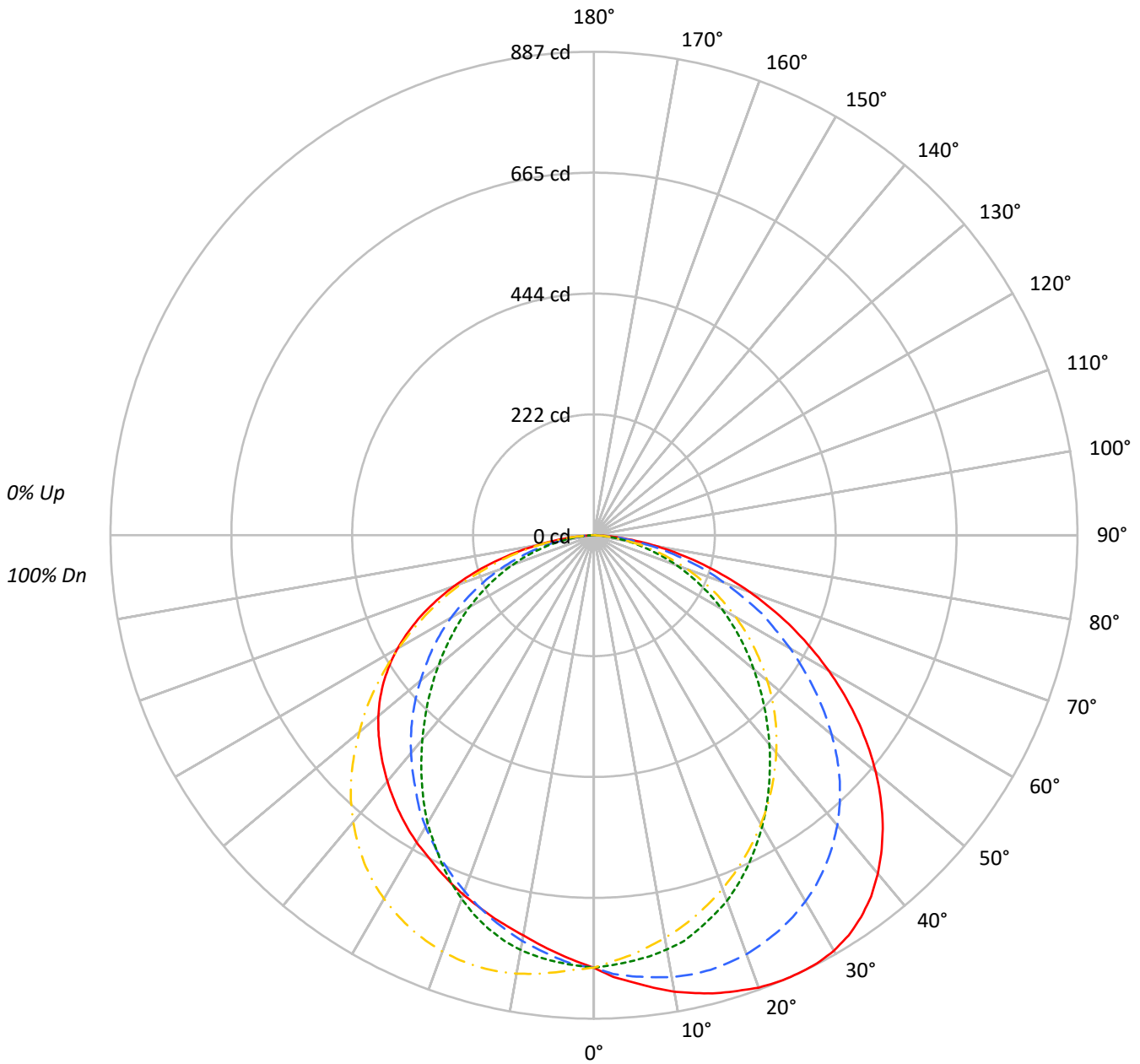
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2327.4 lumens
Efficiency: N/A
Efficacy: 99.5 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

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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	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	86	86	86	84
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	72	72	72	70
3	90	79	71	65	88	78	70	64	75	68	63	72	66	62	69	65	61	61	61	61	59
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	52	52	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	45	45	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	40	40	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	35	35	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	31	31	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	28	28	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	26	26	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	2135	2135	2135	2135
5°	2225	2119	2079	2123
10°	2324	2108	2037	2111
15°	2423	2082	2017	2082
20°	2529	2044	2008	2032
25°	2634	1987	2008	1966
30°	2736	1917	2022	1896
35°	2808	1839	2042	1810
40°	2846	1760	2070	1720
45°	2851	1679	2111	1637
50°	2825	1603	2162	1560
55°	2766	1531	2210	1489
60°	2679	1457	2240	1419
65°	2559	1372	2228	1340
70°	2390	1271	2149	1248
75°	2151	1133	1972	1127
80°	1824	948	1658	964
85°	1269	630	1050	645



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.3	3.2
10°-20°	218.1	9.4
20°-30°	334.2	14.4
30°-40°	406.4	17.5
40°-50°	422.5	18.2
50°-60°	381.6	16.4
60°-70°	290.1	12.5
70°-80°	161.8	7.0
80°-90°	37.2	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°	627.7	27.0
0°-40°	1034.1	44.4
0°-60°	1838.2	79.0
0°-90°	2327.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2327.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	793	793	793	793	793	
5°	824	785	770	786	824	79
15°	870	747	724	747	870	247
25°	887	669	676	662	887	410
35°	855	560	622	551	855	534
45°	749	441	555	430	749	577
55°	590	326	471	317	590	526
65°	402	215	350	210	402	397
75°	207	109	190	108	207	220
85°	41	20	34	21	41	52
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°	793.3	793.3	793.3	793.3	793.3	793.3	793.3	793.3	793.3	793.3	793.3
2.5°	810.9	799.0	799.2	809.6	801.6	805.5	794.4	798.6	797.4	798.3	789.2
5°	823.6	810.9	810.7	819.6	810.7	812.3	798.3	801.1	797.0	794.4	784.6
7.5°	837.1	824.4	823.1	830.8	819.2	817.9	802.3	802.3	794.9	788.5	779.2
10°	850.5	837.3	835.7	841.6	827.1	822.9	804.0	801.1	791.2	781.6	771.6
12.5°	860.5	847.1	845.8	849.5	833.2	825.5	804.0	798.3	783.8	770.3	762.6
15°	869.9	856.2	852.7	854.5	835.8	825.5	801.4	792.5	774.0	756.3	747.2
17.5°	876.5	863.4	859.9	859.7	837.1	822.3	795.9	783.7	761.5	740.0	730.9
20°	883.2	870.1	865.6	862.3	836.8	818.1	787.7	771.3	745.4	721.3	713.7
22.5°	886.5	873.0	868.2	863.2	834.4	810.3	777.7	756.8	727.2	698.5	692.2
25°	887.1	873.2	868.0	860.8	829.5	801.1	764.8	739.4	706.3	674.5	669.1
27.5°	885.6	870.4	865.3	856.6	822.3	789.8	749.4	719.6	684.1	648.9	643.2
30°	880.4	865.1	860.1	848.8	812.2	775.9	732.6	697.6	659.5	622.1	617.1
32.5°	870.1	855.1	851.0	839.7	801.1	759.8	713.0	673.9	632.3	596.6	589.2
35°	854.9	839.9	837.3	825.5	785.5	740.5	691.5	648.0	603.4	567.0	559.8
37.5°	835.1	822.5	818.6	807.0	767.2	718.7	666.9	619.9	574.0	534.8	530.3
40°	810.1	798.3	795.3	785.0	745.9	694.5	640.2	590.8	543.7	507.2	500.9
42.5°	781.6	770.5	768.9	758.1	719.6	667.6	611.4	560.7	512.0	476.9	470.6
45°	749.2	738.5	738.1	728.0	691.0	637.8	581.0	530.1	481.1	444.7	441.3
47.5°	713.5	703.9	703.9	694.5	658.9	605.1	549.8	498.3	450.0	417.8	411.9
50°	674.7	665.6	662.8	658.2	623.6	569.4	516.8	467.2	419.3	388.6	382.9
52.5°	633.2	625.4	627.3	618.8	585.3	532.2	483.5	432.3	388.4	360.5	354.7
55°	589.5	578.4	580.1	577.0	545.3	493.9	446.1	403.4	358.1	331.8	326.4
57.5°	544.2	529.8	535.7	533.8	502.8	454.7	411.9	370.6	327.9	303.7	298.5
60°	497.8	483.9	490.0	488.3	459.1	415.4	376.6	338.3	297.9	275.9	270.7
62.5°	450.0	437.3	442.8	441.5	414.7	375.3	341.4	306.2	267.8	248.0	243.1
65°	401.9	389.7	394.7	393.8	369.0	339.0	305.3	273.1	237.4	220.2	215.4
67.5°	352.7	341.4	346.0	346.0	323.3	294.6	269.1	239.6	207.6	192.8	188.4
70°	303.8	293.3	297.4	297.0	277.7	254.4	232.4	206.1	177.5	165.2	161.5
72.5°	254.6	245.4	249.1	248.7	232.6	217.6	195.8	173.0	148.0	138.2	134.9
75°	206.9	198.2	201.7	201.3	188.2	174.1	159.5	140.6	119.2	112.3	109.0
77.5°	161.4	152.5	155.4	155.4	145.8	135.6	124.0	109.4	94.2	86.8	84.4
80°	117.7	113.4	112.0	112.1	105.7	99.0	93.1	79.0	67.9	62.9	61.2
82.5°	77.3	73.8	72.4	72.7	69.0	65.0	61.2	51.4	44.0	41.1	40.2
85°	41.1	38.5	37.2	38.1	37.4	35.2	33.3	26.6	22.0	20.9	20.4
87.5°	13.0	11.3	10.4	13.7	11.7	10.4	10.0	8.0	6.1	6.1	5.9
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°	793.3	793.3	793.3	793.3	793.3	793.3	793.3	793.3	793.3	793.3	793.3
2.5°	792.2	792.2	785.0	783.3	782.5	783.5	776.3	775.0	785.3	781.8	773.8
5°	785.9	785.5	775.3	773.5	773.5	772.4	764.2	762.4	772.7	769.8	761.1
7.5°	778.1	777.0	765.0	763.7	761.8	761.1	752.0	750.7	759.6	757.8	749.6
10°	768.7	767.6	753.3	752.4	750.3	748.9	740.4	739.4	748.5	745.5	739.1
12.5°	756.3	754.2	739.6	738.7	737.0	736.5	728.1	727.8	737.8	734.8	728.0
15°	740.0	738.3	722.0	722.4	722.6	722.6	715.9	715.6	725.4	724.1	716.7
17.5°	722.0	719.8	704.3	705.4	706.7	708.2	703.0	703.9	714.3	712.6	705.9
20°	701.7	699.5	684.3	687.4	690.2	693.2	689.8	692.4	702.1	701.3	696.3
22.5°	678.9	676.7	662.6	667.5	672.1	677.6	676.1	679.1	689.3	689.1	684.7
25°	651.2	651.7	639.3	645.2	653.0	660.8	661.3	666.2	677.4	676.3	672.3
27.5°	625.3	626.0	612.9	622.9	633.2	643.2	645.6	652.3	663.7	662.8	659.3
30°	598.1	599.0	586.2	599.9	612.5	624.7	629.9	639.0	650.6	650.6	646.9
32.5°	569.7	571.4	558.1	576.4	591.0	605.3	614.3	623.8	637.1	636.7	633.6
35°	540.7	542.5	530.3	553.6	568.3	585.7	596.9	609.5	621.4	621.6	619.2
37.5°	511.1	513.3	502.2	527.7	544.4	564.9	579.4	592.0	605.1	605.8	603.6
40°	481.7	484.1	474.5	499.1	520.2	543.1	559.8	574.6	589.0	589.4	587.9
42.5°	452.2	454.8	447.6	471.7	495.5	520.2	539.8	556.6	571.4	572.3	570.7
45°	423.6	425.8	420.6	446.9	469.8	496.7	519.2	538.3	553.3	554.6	554.0
47.5°	395.1	397.1	392.5	416.5	443.0	471.5	497.6	518.7	534.6	536.1	535.7
50°	367.1	368.8	363.8	389.0	415.2	445.6	472.8	497.2	515.0	516.5	516.3
52.5°	339.4	341.0	336.8	363.2	387.1	419.1	448.7	475.2	492.8	495.0	495.4
55°	312.5	313.3	309.9	335.3	358.4	391.9	426.0	451.7	469.3	471.1	472.2
57.5°	285.7	285.9	283.1	307.4	329.6	363.8	399.5	426.5	443.2	445.0	446.7
60°	259.1	258.9	255.7	279.2	300.5	334.4	371.6	398.4	414.5	416.2	418.4
62.5°	232.6	232.0	229.3	250.9	270.9	304.4	341.8	367.7	383.0	384.1	387.1
65°	206.3	205.8	203.2	223.2	241.3	273.3	309.9	334.6	348.4	349.9	349.4
67.5°	180.4	179.3	177.3	195.2	211.7	241.3	276.5	300.0	311.4	312.7	316.2
70°	154.5	153.2	148.6	167.6	182.1	208.5	241.3	262.2	271.8	273.1	272.6
72.5°	129.0	127.7	122.7	140.3	152.5	175.6	204.8	222.2	230.6	231.7	231.7
75°	104.2	103.4	100.3	113.6	123.8	142.7	167.5	181.9	188.4	189.7	189.3
77.5°	80.3	79.8	76.6	88.1	96.0	110.1	130.1	141.4	146.2	147.7	150.8
80°	57.5	57.4	52.4	63.7	67.2	79.0	93.6	102.3	104.9	107.0	109.2
82.5°	36.8	37.0	32.0	41.6	43.1	50.7	59.8	65.1	67.0	68.7	70.3
85°	17.9	18.7	15.9	22.0	22.2	26.1	30.0	32.0	32.8	34.0	35.5
87.5°	4.6	5.4	3.0	6.3	5.6	7.2	8.3	8.9	8.7	9.6	10.2
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°	793.3	793.3	793.3	793.3	793.3	793.3	793.3	793.3	793.3	793.3	793.3
2.5°	776.4	782.4	779.4	789.0	792.7	786.8	797.2	797.4	789.9	798.6	803.5
5°	764.4	770.5	768.7	778.7	783.3	778.1	790.7	793.1	785.9	795.7	803.5
7.5°	752.2	759.4	757.0	767.2	772.7	768.7	782.2	786.1	780.5	791.2	801.6
10°	741.7	747.8	745.2	755.9	760.7	757.4	770.7	777.9	772.7	785.9	798.3
12.5°	731.3	736.3	733.3	742.2	746.8	742.6	758.9	765.5	761.8	775.5	791.4
15°	718.0	723.5	719.4	727.4	730.9	727.2	740.5	752.0	747.4	762.4	780.0
17.5°	707.8	710.9	705.4	711.7	713.7	708.7	722.2	733.5	730.2	746.5	766.8
20°	696.5	699.1	691.3	694.8	694.7	688.4	700.8	711.9	709.6	727.6	750.7
22.5°	683.9	685.2	676.1	676.9	676.5	666.2	677.3	688.5	687.6	705.8	731.7
25°	670.6	670.8	659.1	658.8	654.7	642.5	652.3	665.0	662.3	681.9	709.1
27.5°	657.5	655.6	641.5	638.2	631.7	617.1	625.8	637.3	635.6	654.9	685.0
30°	643.4	641.0	623.8	617.7	608.2	591.4	598.6	609.3	610.3	627.1	658.8
32.5°	630.1	624.0	604.9	596.0	584.2	564.6	568.5	579.4	580.9	597.9	630.4
35°	612.9	608.8	585.3	570.1	558.5	537.0	541.1	548.7	550.9	567.5	600.6
37.5°	596.6	590.1	565.1	546.6	531.6	509.1	510.2	517.9	520.2	537.0	569.7
40°	579.7	570.5	543.7	522.0	504.8	481.1	479.8	488.0	489.6	506.1	535.7
42.5°	561.8	550.7	520.5	496.8	477.0	453.0	450.4	457.4	459.3	475.4	504.4
45°	543.7	530.3	496.8	470.9	449.3	424.7	422.1	427.4	430.2	445.4	473.3
47.5°	524.4	508.9	472.4	443.5	421.2	396.5	393.4	398.8	401.0	416.0	442.4
50°	504.2	485.4	447.2	415.4	393.2	369.0	364.3	370.6	372.7	386.7	412.6
52.5°	482.0	461.1	420.4	387.1	364.9	341.8	336.2	342.3	344.7	358.4	382.3
55°	458.5	436.0	393.4	361.0	337.0	314.4	309.8	312.2	317.3	330.3	352.5
57.5°	432.1	409.7	364.9	332.0	308.8	287.2	283.3	285.5	290.3	302.9	322.9
60°	403.9	380.3	335.9	302.9	280.5	260.0	256.5	258.5	263.7	275.2	293.7
62.5°	376.2	349.5	305.9	273.1	252.8	233.7	232.8	232.0	236.9	248.0	264.2
65°	342.5	317.0	274.6	243.5	225.0	207.8	204.1	205.8	210.4	220.6	237.6
67.5°	306.4	283.3	242.6	213.9	197.4	182.1	178.9	179.7	184.5	193.4	208.2
70°	268.1	247.8	209.8	184.1	170.2	155.8	153.8	154.0	158.6	166.4	179.3
72.5°	228.0	209.7	176.7	154.7	143.2	132.9	131.0	128.8	133.0	139.7	150.8
75°	187.1	171.0	143.8	125.8	116.8	108.1	106.4	104.2	108.4	114.2	122.9
77.5°	145.8	132.9	111.8	97.9	90.9	84.4	82.9	80.5	84.7	89.0	95.9
80°	105.5	96.0	83.5	68.8	66.4	62.2	60.7	58.1	62.2	65.0	70.1
82.5°	68.1	61.8	54.6	44.4	44.0	40.9	40.2	37.2	40.9	42.6	46.4
85°	34.4	31.5	29.6	22.6	23.3	21.3	21.1	17.9	20.9	21.7	23.9
87.5°	9.8	10.4	9.3	5.6	7.0	6.7	6.7	4.8	6.7	6.7	7.6
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: P837785

CATALOG NUMBER: ORLG-12-4-INS-ASY2R-LD4-1LO-30-120-EDD-90

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	793.3	793.3	793.3	793.3	793.3	793.3	793.3	793.3
2.5°	794.0	797.2	797.9	797.7	799.8	810.9	807.2	810.9
5°	795.9	802.9	804.8	807.3	810.7	823.3	819.2	823.6
7.5°	797.0	807.5	811.6	816.6	822.0	836.0	832.7	837.1
10°	797.0	810.7	816.6	824.9	832.1	848.4	845.3	850.5
12.5°	793.6	811.2	819.6	831.2	840.5	858.0	856.7	860.5
15°	786.8	808.5	819.9	834.9	846.4	866.0	865.4	869.9
17.5°	777.6	803.6	817.5	836.4	850.8	872.8	874.1	876.5
20°	765.9	794.6	812.7	835.8	854.0	878.2	879.9	883.2
22.5°	750.5	783.7	805.5	833.4	854.3	880.4	883.4	886.5
25°	732.4	770.5	796.1	828.8	852.5	880.2	884.3	887.1
27.5°	711.7	753.5	784.0	821.4	847.3	877.3	882.3	885.6
30°	687.6	735.4	770.3	811.8	840.3	871.7	877.1	880.4
32.5°	662.8	715.4	754.1	799.4	830.1	862.9	867.5	870.1
35°	635.8	691.1	734.4	783.5	817.0	848.6	852.1	854.9
37.5°	606.4	664.9	712.0	765.5	798.5	828.8	832.0	835.1
40°	576.0	637.3	686.9	743.5	776.4	804.6	807.9	810.1
42.5°	545.5	606.8	660.0	717.6	750.3	777.4	779.4	781.6
45°	514.6	575.1	629.9	688.9	721.3	746.6	747.4	749.2
47.5°	483.1	542.4	596.8	656.2	688.2	711.3	712.0	713.5
50°	451.5	509.6	561.4	620.8	652.1	676.5	673.2	674.7
52.5°	420.4	475.2	528.1	582.7	613.6	635.3	636.2	633.2
55°	389.9	441.5	490.2	542.7	572.2	589.0	588.4	589.5
57.5°	359.0	407.5	452.1	500.2	528.9	544.8	548.1	544.2
60°	327.5	373.0	413.0	456.5	484.3	497.6	501.5	497.8
62.5°	296.3	338.1	374.3	412.3	438.0	454.5	454.1	450.0
65°	265.0	302.9	335.3	367.5	389.9	406.4	405.6	401.9
67.5°	236.1	267.4	296.4	322.5	342.0	353.2	357.1	352.7
70°	204.3	231.3	256.8	277.7	293.8	304.0	307.7	303.8
72.5°	172.5	195.4	213.4	233.5	245.9	254.4	258.3	254.6
75°	141.0	159.9	174.5	190.2	198.9	206.1	210.6	206.9
77.5°	110.5	125.1	136.7	148.2	158.2	159.9	163.8	161.4
80°	81.4	92.0	100.5	108.1	115.3	116.0	119.2	117.7
82.5°	54.2	61.2	63.5	71.4	76.1	75.3	78.5	77.3
85°	28.7	32.9	36.8	39.2	41.8	39.4	42.2	41.1
87.5°	9.6	10.2	8.9	12.6	13.9	11.8	13.5	13.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)