

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: P837731

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

Issue Date: 5/21/2024

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

**Test Information**

Test Method: LM-79-08
Report Number: P837731
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
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

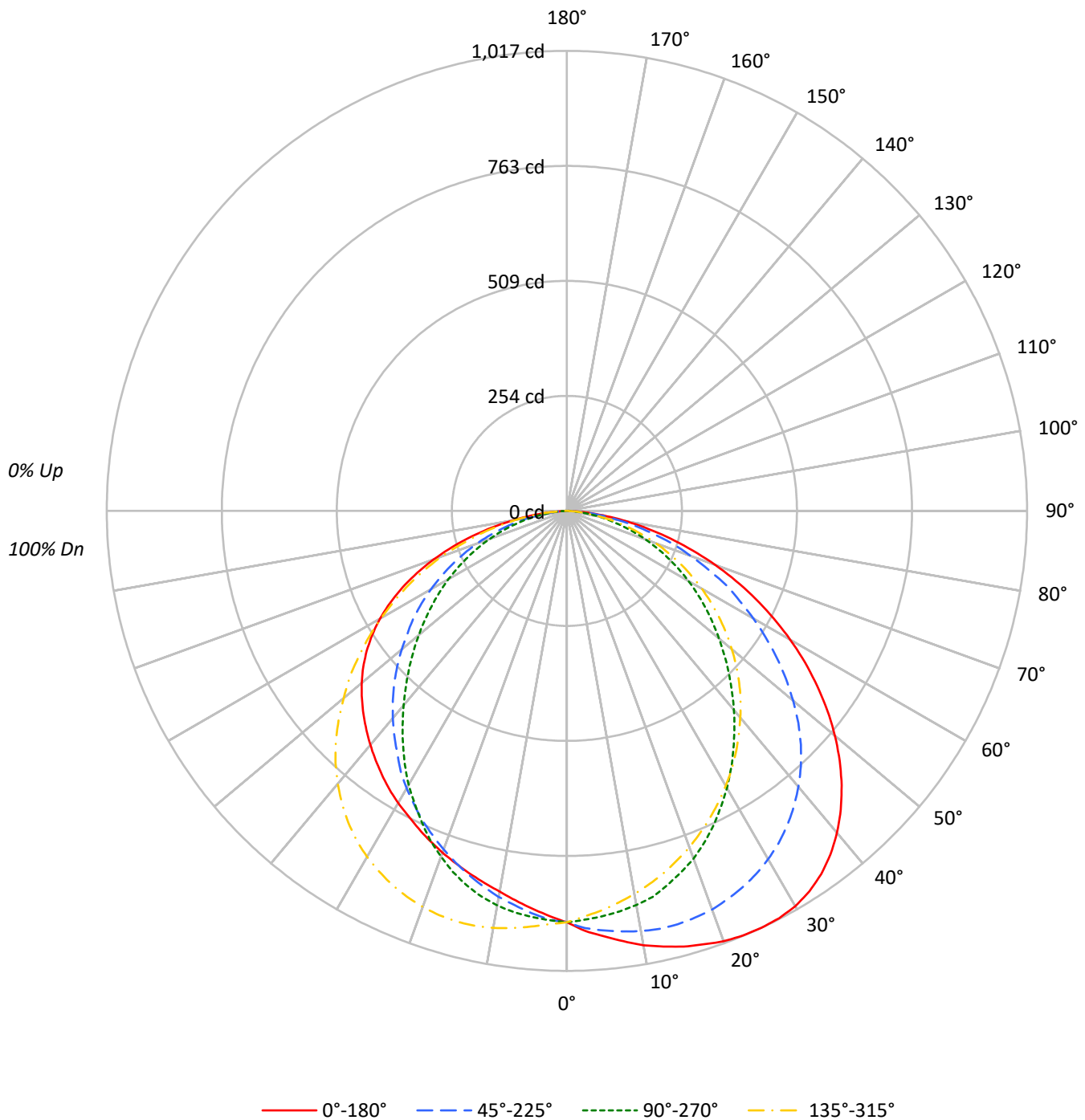
Lumens per Lamp: N/A
Luminaire Lumens: 2668.0 lumens
Efficiency: N/A
Efficacy: 114.0 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	2447	2447	2447	2447
5°	2551	2430	2384	2434
10°	2664	2417	2335	2420
15°	2778	2386	2312	2387
20°	2899	2343	2302	2330
25°	3019	2277	2302	2254
30°	3136	2198	2317	2174
35°	3219	2108	2341	2075
40°	3262	2017	2373	1972
45°	3269	1925	2419	1877
50°	3238	1837	2478	1788
55°	3171	1756	2534	1707
60°	3071	1670	2568	1627
65°	2933	1572	2554	1536
70°	2740	1457	2463	1430
75°	2466	1299	2260	1292
80°	2091	1088	1900	1105
85°	1454	719	1204	741

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.3	3.2
10°-20°	250.0	9.4
20°-30°	383.2	14.4
30°-40°	465.9	17.5
40°-50°	484.3	18.2
50°-60°	437.5	16.4
60°-70°	332.6	12.5
70°-80°	185.4	7.0
80°-90°	42.7	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°	719.5	27.0
0°-40°	1185.4	44.4
0°-60°	2107.2	79.0
0°-90°	2668.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2668.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	909	909	909	909	909	
5°	944	899	882	901	944	91
15°	997	857	830	857	997	283
25°	1017	767	775	759	1017	470
35°	980	642	712	632	980	612
45°	859	506	636	493	859	661
55°	676	374	540	364	676	603
65°	461	247	401	241	461	455
75°	237	125	217	124	237	252
85°	47	23	39	24	47	59
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°	909.4	909.4	909.4	909.4	909.4	909.4	909.4	909.4	909.4	909.4	909.4
2.5°	929.5	915.9	916.2	928.0	918.9	923.4	910.6	915.5	914.0	915.1	904.7
5°	944.2	929.5	929.3	939.5	929.3	931.2	915.1	918.3	913.6	910.6	899.4
7.5°	959.6	945.0	943.5	952.4	939.1	937.6	919.8	919.8	911.3	903.9	893.2
10°	974.9	959.9	957.9	964.7	948.2	943.3	921.7	918.3	907.0	896.0	884.6
12.5°	986.4	971.1	969.6	973.9	955.2	946.3	921.7	915.1	898.6	883.1	874.2
15°	997.2	981.5	977.5	979.6	958.2	946.3	918.7	908.5	887.3	866.9	856.6
17.5°	1004.8	989.8	985.7	985.5	959.6	942.7	912.3	898.3	872.9	848.3	837.9
20°	1012.5	997.4	992.3	988.5	959.2	937.8	903.0	884.1	854.4	826.9	818.2
22.5°	1016.3	1000.8	995.3	989.6	956.5	928.9	891.6	867.6	833.6	800.8	793.6
25°	1016.9	1001.0	995.1	986.8	950.9	918.3	876.7	847.6	809.7	773.2	767.0
27.5°	1015.2	997.8	991.9	981.9	942.7	905.3	859.1	824.9	784.2	743.9	737.3
30°	1009.3	991.7	985.9	973.0	931.0	889.4	839.8	799.7	756.0	713.2	707.4
32.5°	997.4	980.2	975.6	962.6	918.3	871.0	817.3	772.6	724.8	683.9	675.4
35°	980.0	962.8	959.9	946.3	900.5	848.9	792.7	742.9	691.7	649.9	641.7
37.5°	957.3	942.9	938.4	925.1	879.5	823.9	764.5	710.6	658.0	613.0	607.9
40°	928.7	915.1	911.7	899.8	855.1	796.1	733.9	677.3	623.2	581.4	574.2
42.5°	896.0	883.3	881.4	869.1	824.9	765.3	700.9	642.7	586.9	546.6	539.4
45°	858.9	846.6	846.2	834.5	792.1	731.2	666.1	607.7	551.5	509.7	505.9
47.5°	817.9	806.9	806.9	796.1	755.4	693.6	630.2	571.2	515.9	479.0	472.2
50°	773.4	763.0	759.8	754.5	714.9	652.7	592.5	535.6	480.7	445.5	438.9
52.5°	725.9	717.0	719.1	709.3	670.9	610.1	554.3	495.5	445.2	413.2	406.6
55°	675.8	663.1	665.0	661.4	625.1	566.2	511.4	462.4	410.5	380.3	374.2
57.5°	623.9	607.3	614.1	612.0	576.3	521.2	472.2	424.9	375.9	348.1	342.2
60°	570.6	554.7	561.7	559.8	526.3	476.2	431.7	387.8	341.5	316.3	310.3
62.5°	515.9	501.2	507.6	506.1	475.4	430.2	391.4	351.1	306.9	284.2	278.7
65°	460.7	446.7	452.5	451.4	423.0	388.6	350.0	313.1	272.2	252.4	246.9
67.5°	404.3	391.4	396.7	396.7	370.6	337.7	308.4	274.7	238.0	221.0	215.9
70°	348.3	336.2	340.9	340.5	318.4	291.7	266.4	236.3	203.4	189.4	185.2
72.5°	291.9	281.3	285.5	285.1	266.6	249.5	224.4	198.3	169.7	158.5	154.6
75°	237.2	227.2	231.2	230.8	215.7	199.6	182.8	161.2	136.6	128.8	124.9
77.5°	185.0	174.8	178.2	178.2	167.2	155.5	142.1	125.4	108.0	99.5	96.7
80°	134.9	130.0	128.3	128.5	121.1	113.5	106.7	90.6	77.8	72.1	70.2
82.5°	88.7	84.6	82.9	83.4	79.1	74.5	70.2	59.0	50.5	47.1	46.0
85°	47.1	44.1	42.6	43.7	42.8	40.3	38.2	30.5	25.2	24.0	23.3
87.5°	14.8	12.9	11.9	15.7	13.4	11.9	11.5	9.1	7.0	7.0	6.8
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°	909.4	909.4	909.4	909.4	909.4	909.4	909.4	909.4	909.4	909.4	909.4
2.5°	908.1	908.1	899.8	897.9	897.1	898.1	889.9	888.4	900.2	896.2	887.1
5°	900.9	900.5	888.8	886.7	886.7	885.4	876.1	873.9	885.8	882.4	872.5
7.5°	892.0	890.7	876.9	875.4	873.3	872.5	862.1	860.6	870.8	868.6	859.3
10°	881.2	879.9	863.6	862.5	860.2	858.5	848.7	847.6	858.0	854.6	847.2
12.5°	866.9	864.6	847.9	846.8	844.9	844.2	834.7	834.3	845.7	842.3	834.5
15°	848.3	846.4	827.7	828.1	828.3	828.3	820.7	820.3	831.5	830.0	821.6
17.5°	827.7	825.2	807.3	808.6	810.1	811.8	805.9	806.9	818.8	816.9	809.2
20°	804.4	801.8	784.4	788.0	791.2	794.6	790.8	793.8	804.8	803.9	798.2
22.5°	778.3	775.7	759.6	765.1	770.4	776.8	775.1	778.5	790.2	789.9	784.9
25°	746.5	747.1	732.9	739.7	748.6	757.5	758.1	763.6	776.6	775.3	770.6
27.5°	716.8	717.6	702.5	714.0	725.9	737.3	740.1	747.7	760.9	759.8	755.8
30°	685.6	686.6	672.0	687.7	702.1	716.1	722.1	732.5	745.8	745.8	741.6
32.5°	653.1	655.0	639.8	660.8	677.5	693.9	704.2	715.1	730.3	729.9	726.3
35°	619.8	621.9	607.9	634.7	651.4	671.4	684.3	698.7	712.3	712.5	709.8
37.5°	585.9	588.4	575.7	605.0	624.1	647.6	664.2	678.6	693.6	694.5	691.9
40°	552.2	554.9	543.9	572.1	596.3	622.6	641.7	658.6	675.2	675.6	673.9
42.5°	518.4	521.4	513.1	540.7	568.1	596.3	618.8	638.1	655.0	656.1	654.2
45°	485.5	488.1	482.2	512.3	538.6	569.3	595.2	617.1	634.2	635.7	635.1
47.5°	452.9	455.2	449.9	477.5	507.8	540.5	570.4	594.6	612.8	614.5	614.1
50°	420.9	422.8	417.0	445.9	476.0	510.8	542.0	570.0	590.3	592.0	591.8
52.5°	389.0	390.9	386.1	416.4	443.8	480.5	514.4	544.7	564.9	567.4	567.9
55°	358.3	359.1	355.3	384.4	410.9	449.3	488.3	517.8	537.9	540.1	541.3
57.5°	327.5	327.7	324.5	352.3	377.8	417.0	458.0	488.9	508.0	510.2	512.1
60°	297.0	296.8	293.2	320.1	344.5	383.3	425.9	456.7	475.2	477.1	479.6
62.5°	266.6	266.0	262.8	287.6	310.5	348.9	391.8	421.5	439.1	440.4	443.8
65°	236.5	235.9	232.9	255.8	276.6	313.3	355.3	383.5	399.4	401.1	400.5
67.5°	206.8	205.5	203.2	223.8	242.7	276.6	316.9	343.9	357.0	358.5	362.5
70°	177.1	175.6	170.3	192.2	208.7	239.1	276.6	300.6	311.6	313.1	312.5
72.5°	147.8	146.4	140.6	160.8	174.8	201.3	234.8	254.8	264.3	265.6	265.6
75°	119.4	118.6	115.0	130.2	141.9	163.5	192.0	208.5	215.9	217.4	217.0
77.5°	92.1	91.4	87.8	101.0	110.1	126.2	149.1	162.1	167.6	169.3	172.9
80°	66.0	65.8	60.0	73.0	77.0	90.6	107.3	117.3	120.3	122.6	125.2
82.5°	42.2	42.4	36.7	47.7	49.4	58.1	68.5	74.7	76.8	78.7	80.6
85°	20.6	21.4	18.2	25.2	25.5	29.9	34.4	36.7	37.5	39.0	40.7
87.5°	5.3	6.2	3.4	7.2	6.4	8.3	9.5	10.2	10.0	11.0	11.7
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°	909.4	909.4	909.4	909.4	909.4	909.4	909.4	909.4	909.4	909.4	909.4
2.5°	890.1	896.9	893.5	904.5	908.7	901.9	913.8	914.0	905.6	915.5	921.0
5°	876.3	883.3	881.2	892.6	897.9	892.0	906.4	909.2	900.9	912.1	921.0
7.5°	862.3	870.6	867.8	879.5	885.8	881.2	896.6	901.1	894.7	907.0	918.9
10°	850.2	857.2	854.2	866.5	872.0	868.2	883.5	891.8	885.8	900.9	915.1
12.5°	838.3	844.0	840.6	850.8	856.1	851.2	869.9	877.6	873.3	889.0	907.2
15°	823.0	829.4	824.7	833.9	837.9	833.6	848.9	862.1	856.8	873.9	894.1
17.5°	811.4	815.0	808.6	815.8	818.2	812.4	827.9	840.9	837.0	855.7	879.0
20°	798.4	801.4	792.5	796.5	796.3	789.1	803.3	816.0	813.5	834.1	860.6
22.5°	784.0	785.5	775.1	775.9	775.5	763.6	776.4	789.3	788.2	809.0	838.7
25°	768.7	768.9	755.6	755.2	750.5	736.5	747.7	762.4	759.2	781.7	812.9
27.5°	753.7	751.5	735.4	731.6	724.2	707.4	717.4	730.5	728.6	750.7	785.3
30°	737.5	734.8	715.1	708.1	697.2	677.9	686.2	698.5	699.6	718.9	755.2
32.5°	722.3	715.3	693.4	683.2	669.7	647.2	651.6	664.2	665.9	685.4	722.7
35°	702.5	697.9	670.9	653.5	640.2	615.6	620.2	628.9	631.5	650.6	688.5
37.5°	683.9	676.5	647.8	626.6	609.4	583.5	584.8	593.7	596.3	615.6	653.1
40°	664.6	654.0	623.2	598.4	578.7	551.5	550.0	559.4	561.3	580.2	614.1
42.5°	644.0	631.3	596.7	569.5	546.9	519.3	516.3	524.4	526.5	544.9	578.2
45°	623.2	607.9	569.5	539.9	515.0	486.8	483.9	490.0	493.2	510.6	542.6
47.5°	601.2	583.3	541.5	508.5	482.8	454.6	451.0	457.1	459.7	476.9	507.2
50°	578.0	556.4	512.7	476.2	450.8	423.0	417.7	424.9	427.2	443.3	473.0
52.5°	552.6	528.6	481.9	443.8	418.3	391.8	385.4	392.4	395.2	410.9	438.2
55°	525.6	499.8	451.0	413.9	386.3	360.4	355.1	357.9	363.8	378.6	404.1
57.5°	495.3	469.6	418.3	380.5	354.0	329.2	324.8	327.3	332.8	347.2	370.2
60°	463.1	435.9	385.0	347.2	321.6	298.0	294.0	296.3	302.3	315.4	336.6
62.5°	431.2	400.7	350.6	313.1	289.8	267.9	266.9	266.0	271.5	284.2	302.9
65°	392.6	363.4	314.8	279.2	257.9	238.2	234.0	235.9	241.2	252.8	272.4
67.5°	351.3	324.8	278.1	245.2	226.3	208.7	205.1	206.0	211.5	221.7	238.6
70°	307.4	284.0	240.5	211.1	195.2	178.6	176.3	176.5	181.8	190.7	205.5
72.5°	261.3	240.3	202.6	177.3	164.2	152.3	150.2	147.6	152.5	160.2	172.9
75°	214.5	196.0	164.8	144.2	133.8	123.9	122.0	119.4	124.3	130.9	140.8
77.5°	167.2	152.3	128.1	112.2	104.2	96.7	95.0	92.3	97.2	102.0	109.9
80°	120.9	110.1	95.7	78.9	76.2	71.3	69.6	66.6	71.3	74.5	80.4
82.5°	78.1	70.8	62.6	50.9	50.5	46.9	46.0	42.6	46.9	48.8	53.2
85°	39.5	36.1	33.9	25.9	26.7	24.4	24.2	20.6	24.0	24.8	27.4
87.5°	11.2	11.9	10.6	6.4	8.1	7.6	7.6	5.5	7.6	7.6	8.7
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: P837731

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

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	909.4	909.4	909.4	909.4	909.4	909.4	909.4	909.4
2.5°	910.2	913.8	914.7	914.5	916.8	929.5	925.3	929.5
5°	912.3	920.4	922.5	925.5	929.3	943.7	939.1	944.2
7.5°	913.6	925.7	930.4	936.1	942.2	958.4	954.6	959.6
10°	913.6	929.3	936.1	945.6	953.9	972.6	969.0	974.9
12.5°	909.8	929.9	939.5	952.9	963.5	983.6	982.1	986.4
15°	901.9	926.8	939.9	957.1	970.2	992.7	992.1	997.2
17.5°	891.3	921.2	937.2	958.8	975.3	1000.6	1002.1	1004.8
20°	878.0	910.9	931.6	958.2	978.9	1006.7	1008.6	1012.5
22.5°	860.4	898.3	923.4	955.4	979.4	1009.3	1012.7	1016.3
25°	839.6	883.3	912.6	950.1	977.2	1009.1	1013.7	1016.9
27.5°	815.8	863.8	898.8	941.6	971.3	1005.7	1011.4	1015.2
30°	788.2	843.0	883.1	930.6	963.2	999.3	1005.5	1009.3
32.5°	759.8	820.1	864.4	916.4	951.6	989.1	994.4	997.4
35°	728.9	792.3	841.9	898.1	936.5	972.8	976.8	980.0
37.5°	695.1	762.2	816.2	877.6	915.3	950.1	953.7	957.3
40°	660.3	730.5	787.4	852.3	890.1	922.3	926.1	928.7
42.5°	625.3	695.5	756.6	822.6	860.2	891.1	893.5	896.0
45°	589.9	659.3	722.1	789.7	826.9	855.9	856.8	858.9
47.5°	553.9	621.7	684.1	752.2	788.9	815.4	816.2	817.9
50°	517.6	584.2	643.6	711.7	747.5	775.5	771.7	773.4
52.5°	481.9	544.7	605.4	668.0	703.4	728.2	729.3	725.9
55°	446.9	506.1	561.9	622.2	655.9	675.2	674.5	675.8
57.5°	411.5	467.1	518.2	573.4	606.2	624.5	628.3	623.9
60°	375.5	427.6	473.5	523.3	555.1	570.4	574.9	570.6
62.5°	339.6	387.5	429.1	472.6	502.1	521.0	520.5	515.9
65°	303.8	347.2	384.4	421.3	446.9	465.8	465.0	460.7
67.5°	270.7	306.5	339.8	369.7	392.0	404.9	409.4	404.3
70°	234.2	265.2	294.4	318.4	336.9	348.5	352.8	348.3
72.5°	197.7	224.0	244.6	267.7	281.9	291.7	296.1	291.9
75°	161.6	183.3	200.0	218.1	228.0	236.3	241.4	237.2
77.5°	126.6	143.4	156.8	169.9	181.4	183.3	187.7	185.0
80°	93.3	105.4	115.2	123.9	132.2	133.0	136.6	134.9
82.5°	62.2	70.2	72.8	81.9	87.2	86.3	89.9	88.7
85°	32.9	37.8	42.2	45.0	47.9	45.2	48.4	47.1
87.5°	11.0	11.7	10.2	14.4	15.9	13.6	15.5	14.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)