

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: P837740

Luminaire Tested: **ORLG-12-4-INS-ASY2R-LD4-1LO-35-120-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: P837740
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-35-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

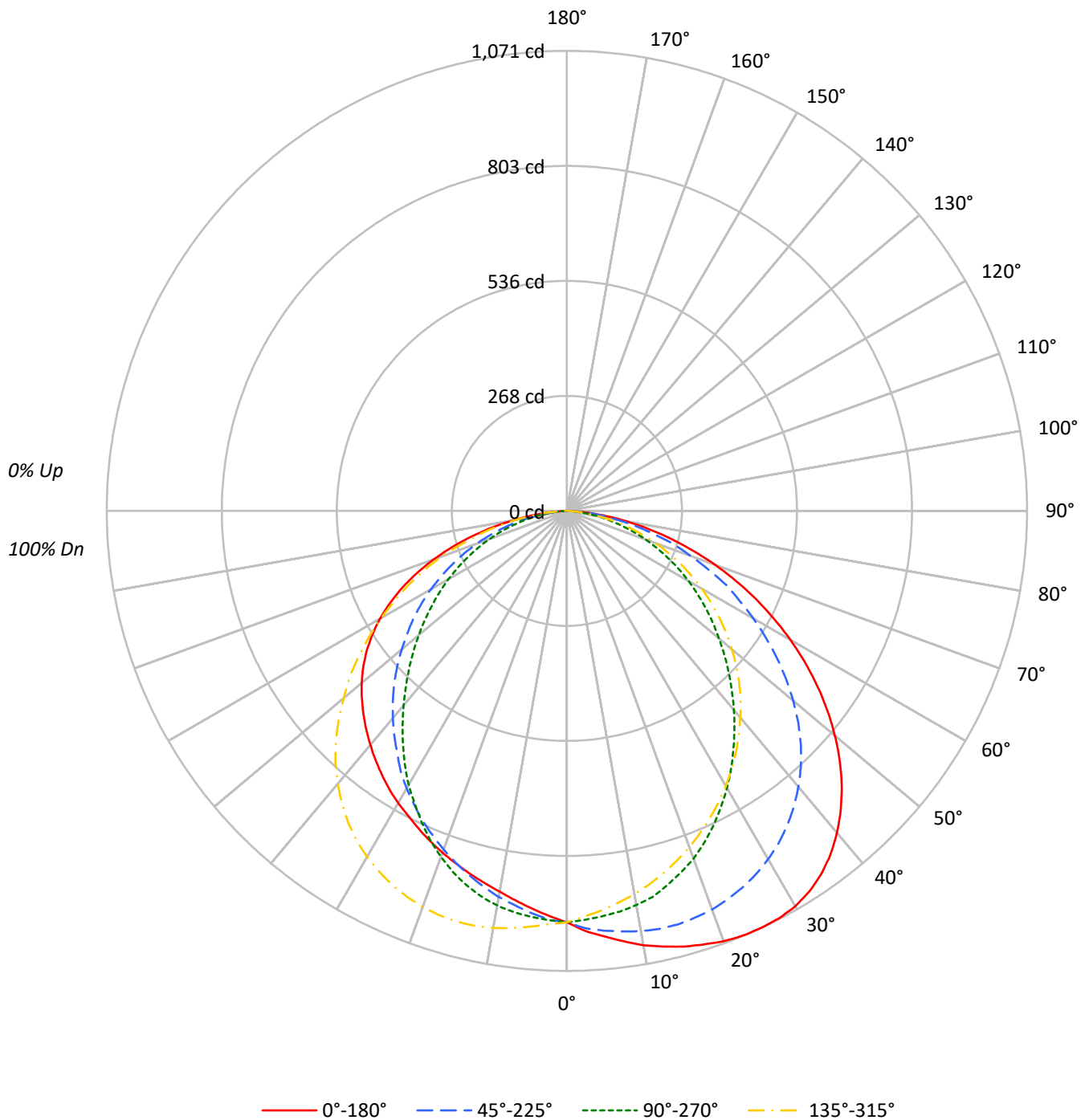
Lumens per Lamp: N/A
Luminaire Lumens: 2809.9 lumens
Efficiency: N/A
Efficacy: 120.1 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	2577	2577	2577	2577
5°	2686	2559	2511	2563
10°	2806	2546	2460	2549
15°	2926	2513	2435	2514
20°	3054	2468	2425	2454
25°	3180	2398	2424	2374
30°	3303	2315	2441	2289
35°	3391	2220	2465	2185
40°	3436	2125	2499	2076
45°	3443	2028	2548	1977
50°	3410	1935	2610	1883
55°	3339	1849	2669	1797
60°	3235	1759	2704	1714
65°	3089	1656	2690	1617
70°	2886	1534	2594	1507
75°	2597	1368	2381	1361
80°	2202	1145	2001	1164
85°	1531	760	1269	778

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.9	3.2
10°-20°	263.3	9.4
20°-30°	403.5	14.4
30°-40°	490.7	17.5
40°-50°	510.1	18.2
50°-60°	460.8	16.4
60°-70°	350.3	12.5
70°-80°	195.3	7.0
80°-90°	45.0	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°	757.8	27.0
0°-40°	1248.5	44.4
0°-60°	2219.3	79.0
0°-90°	2809.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2809.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	958	958	958	958	958	
5°	994	947	929	949	994	96
15°	1050	902	874	902	1050	298
25°	1071	808	816	800	1071	495
35°	1032	676	750	665	1032	645
45°	905	533	670	519	905	696
55°	712	394	569	383	712	635
65°	485	260	422	254	485	479
75°	250	132	229	131	250	265
85°	50	25	41	25	50	62
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°	957.7	957.7	957.7	957.7	957.7	957.7	957.7	957.7	957.7	957.7	957.7
2.5°	979.0	964.7	964.9	977.4	967.8	972.5	959.1	964.2	962.7	963.8	952.8
5°	994.4	979.0	978.7	989.5	978.7	980.8	963.8	967.1	962.2	959.1	947.2
7.5°	1010.7	995.3	993.7	1003.1	989.0	987.5	968.7	968.7	959.8	951.9	940.8
10°	1026.8	1010.9	1008.9	1016.0	998.6	993.5	970.7	967.1	955.3	943.7	931.6
12.5°	1038.8	1022.8	1021.2	1025.7	1006.0	996.6	970.7	963.8	946.3	930.0	920.7
15°	1050.2	1033.7	1029.5	1031.7	1009.1	996.6	967.6	956.8	934.5	913.1	902.1
17.5°	1058.3	1042.4	1038.2	1037.9	1010.7	992.8	960.9	946.1	919.3	893.4	882.5
20°	1066.3	1050.5	1045.1	1041.1	1010.2	987.7	951.0	931.2	899.9	870.8	861.7
22.5°	1070.3	1054.0	1048.2	1042.2	1007.3	978.3	939.0	913.7	878.0	843.4	835.8
25°	1071.0	1054.3	1048.0	1039.3	1001.5	967.1	923.3	892.7	852.7	814.3	807.8
27.5°	1069.2	1050.9	1044.6	1034.1	992.8	953.5	904.8	868.8	825.9	783.5	776.6
30°	1063.0	1044.4	1038.4	1024.8	980.5	936.7	884.5	842.2	796.2	751.1	745.1
32.5°	1050.5	1032.4	1027.4	1013.8	967.1	917.3	860.8	813.6	763.4	720.3	711.3
35°	1032.1	1014.0	1010.9	996.6	948.4	894.1	834.9	782.4	728.5	684.5	675.8
37.5°	1008.2	993.0	988.3	974.3	926.2	867.7	805.2	748.4	693.0	645.6	640.3
40°	978.1	963.8	960.2	947.7	900.5	838.4	773.0	713.3	656.4	612.4	604.8
42.5°	943.7	930.3	928.3	915.3	868.8	806.0	738.1	676.9	618.2	575.7	568.1
45°	904.6	891.6	891.2	878.9	834.2	770.1	701.5	640.1	580.9	536.8	532.8
47.5°	861.5	849.8	849.8	838.4	795.5	730.5	663.7	601.6	543.3	504.4	497.3
50°	814.5	803.6	800.2	794.7	752.9	687.4	624.0	564.1	506.2	469.2	462.2
52.5°	764.5	755.1	757.3	747.1	706.6	642.5	583.8	521.9	468.9	435.2	428.3
55°	711.8	698.4	700.4	696.6	658.4	596.3	538.6	487.0	432.3	400.6	394.1
57.5°	657.0	639.6	646.8	644.5	607.0	548.9	497.3	447.5	395.9	366.6	360.4
60°	601.0	584.2	591.6	589.6	554.3	501.5	454.6	408.4	359.7	333.1	326.8
62.5°	543.3	527.9	534.6	533.0	500.7	453.1	412.2	369.7	323.3	299.4	293.6
65°	485.2	470.5	476.5	475.4	445.5	409.3	368.6	329.7	286.6	265.9	260.0
67.5°	425.8	412.2	417.8	417.8	390.3	355.7	324.8	289.3	250.7	232.8	227.4
70°	366.8	354.1	359.0	358.6	335.3	307.2	280.6	248.9	214.2	199.5	195.0
72.5°	307.4	296.2	300.7	300.3	280.8	262.7	236.4	208.9	178.7	166.9	162.9
75°	249.8	239.3	243.5	243.1	227.2	210.2	192.6	169.8	143.9	135.6	131.6
77.5°	194.8	184.1	187.7	187.7	176.0	163.8	149.7	132.0	113.7	104.8	101.9
80°	142.1	136.9	135.2	135.4	127.6	119.5	112.4	95.4	82.0	76.0	73.9
82.5°	93.4	89.1	87.4	87.8	83.3	78.4	73.9	62.1	53.2	49.6	48.5
85°	49.6	46.5	44.9	46.0	45.1	42.4	40.2	32.2	26.6	25.2	24.6
87.5°	15.6	13.6	12.5	16.5	14.1	12.5	12.1	9.6	7.4	7.4	7.1
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°	957.7	957.7	957.7	957.7	957.7	957.7	957.7	957.7	957.7	957.7	957.7
2.5°	956.4	956.4	947.7	945.7	944.8	945.9	937.2	935.6	948.1	943.9	934.3
5°	948.8	948.4	936.1	933.8	933.8	932.5	922.7	920.4	932.9	929.4	918.9
7.5°	939.4	938.1	923.6	922.0	919.8	918.9	907.9	906.4	917.1	914.8	905.0
10°	928.0	926.7	909.5	908.4	905.9	904.1	893.8	892.7	903.7	900.1	892.3
12.5°	913.1	910.6	893.0	891.8	889.8	889.2	879.1	878.7	890.7	887.1	878.9
15°	893.4	891.4	871.7	872.2	872.4	872.4	864.4	863.9	875.7	874.2	865.2
17.5°	871.7	869.0	850.3	851.6	853.2	855.0	848.7	849.8	862.3	860.3	852.3
20°	847.2	844.5	826.2	830.0	833.3	836.9	832.9	836.0	847.6	846.7	840.7
22.5°	819.7	817.0	800.0	805.8	811.4	818.1	816.3	819.9	832.2	832.0	826.6
25°	786.2	786.8	771.9	779.0	788.4	797.8	798.5	804.3	817.9	816.5	811.6
27.5°	754.9	755.8	739.9	752.0	764.5	776.6	779.5	787.5	801.4	800.2	796.0
30°	722.0	723.2	707.7	724.3	739.5	754.2	760.5	771.4	785.5	785.5	781.0
32.5°	687.9	689.9	673.8	695.9	713.6	730.8	741.7	753.1	769.2	768.7	764.9
35°	652.8	655.0	640.3	668.4	686.1	707.1	720.7	735.9	750.2	750.4	747.5
37.5°	617.0	619.7	606.3	637.2	657.3	682.1	699.5	714.7	730.5	731.4	728.7
40°	581.5	584.4	572.8	602.5	628.0	655.7	675.8	693.7	711.1	711.5	709.8
42.5°	546.0	549.1	540.4	569.5	598.3	628.0	651.7	672.0	689.9	691.0	689.0
45°	511.4	514.1	507.8	539.5	567.2	599.6	626.9	649.9	668.0	669.5	668.9
47.5°	477.0	479.4	473.8	502.9	534.8	569.2	600.7	626.2	645.4	647.2	646.8
50°	443.2	445.2	439.2	469.6	501.3	538.0	570.8	600.3	621.7	623.5	623.3
52.5°	409.7	411.7	406.6	438.5	467.4	506.0	541.8	573.7	594.9	597.6	598.1
55°	377.3	378.2	374.2	404.8	432.7	473.2	514.3	545.3	566.6	568.8	570.1
57.5°	344.9	345.2	341.8	371.1	397.9	439.2	482.3	514.9	535.1	537.3	539.3
60°	312.8	312.5	308.7	337.1	362.8	403.7	448.6	481.0	500.4	502.4	505.1
62.5°	280.8	280.2	276.8	302.9	327.1	367.5	412.6	443.9	462.4	463.8	467.4
65°	249.1	248.4	245.3	269.4	291.3	330.0	374.2	403.9	420.7	422.5	421.8
67.5°	217.8	216.5	214.0	235.7	255.6	291.3	333.8	362.1	376.0	377.6	381.8
70°	186.5	185.0	179.4	202.4	219.8	251.8	291.3	316.6	328.2	329.7	329.1
72.5°	155.7	154.1	148.1	169.3	184.1	212.0	247.3	268.3	278.4	279.7	279.7
75°	125.8	124.9	121.1	137.2	149.5	172.2	202.2	219.6	227.4	229.0	228.5
77.5°	97.0	96.3	92.5	106.3	115.9	132.9	157.1	170.7	176.5	178.3	182.1
80°	69.5	69.3	63.2	76.9	81.1	95.4	113.0	123.5	126.7	129.1	131.8
82.5°	44.5	44.7	38.6	50.3	52.1	61.2	72.2	78.6	80.9	82.9	84.9
85°	21.7	22.6	19.2	26.6	26.8	31.5	36.2	38.6	39.5	41.1	42.9
87.5°	5.6	6.5	3.6	7.6	6.7	8.7	10.1	10.7	10.5	11.6	12.3
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°	957.7	957.7	957.7	957.7	957.7	957.7	957.7	957.7	957.7	957.7	957.7
2.5°	937.4	944.6	941.0	952.6	957.1	949.9	962.4	962.7	953.7	964.2	970.0
5°	922.9	930.3	928.0	940.1	945.7	939.4	954.6	957.5	948.8	960.6	970.0
7.5°	908.1	916.9	914.0	926.2	932.9	928.0	944.3	949.0	942.3	955.3	967.8
10°	895.4	902.8	899.7	912.6	918.4	914.4	930.5	939.2	932.9	948.8	963.8
12.5°	882.9	888.9	885.4	896.1	901.7	896.5	916.2	924.2	919.8	936.3	955.5
15°	866.8	873.5	868.6	878.2	882.5	878.0	894.1	907.9	902.3	920.4	941.7
17.5°	854.5	858.3	851.6	859.2	861.7	855.6	872.0	885.6	881.6	901.2	925.8
20°	840.9	844.0	834.6	838.9	838.7	831.1	846.0	859.4	856.8	878.4	906.4
22.5°	825.7	827.3	816.3	817.2	816.8	804.3	817.7	831.3	830.2	852.1	883.3
25°	809.6	809.8	795.8	795.3	790.4	775.7	787.5	802.9	799.6	823.2	856.1
27.5°	793.8	791.5	774.5	770.5	762.7	745.1	755.6	769.4	767.4	790.6	827.0
30°	776.8	773.9	753.1	745.7	734.3	714.0	722.7	735.7	736.8	757.1	795.3
32.5°	760.7	753.3	730.3	719.6	705.3	681.6	686.3	699.5	701.3	721.8	761.1
35°	739.9	735.0	706.6	688.3	674.2	648.3	653.2	662.4	665.1	685.2	725.2
37.5°	720.3	712.4	682.3	659.9	641.8	614.6	615.9	625.3	628.0	648.3	687.9
40°	699.9	688.8	656.4	630.2	609.5	580.9	579.3	589.1	591.1	611.0	646.8
42.5°	678.3	664.9	628.4	599.8	575.9	546.9	543.8	552.3	554.5	573.9	609.0
45°	656.4	640.3	599.8	568.6	542.4	512.7	509.6	516.1	519.4	537.7	571.5
47.5°	633.1	614.4	570.4	535.5	508.5	478.8	475.0	481.4	484.1	502.2	534.2
50°	608.8	586.0	540.0	501.5	474.7	445.5	439.9	447.5	449.9	466.9	498.2
52.5°	582.0	556.7	507.6	467.4	440.6	412.6	405.9	413.3	416.2	432.7	461.6
55°	553.6	526.3	475.0	435.9	406.8	379.6	374.0	376.9	383.1	398.8	425.6
57.5°	521.7	494.6	440.6	400.8	372.9	346.7	342.0	344.7	350.5	365.7	389.8
60°	487.7	459.1	405.5	365.7	338.7	313.9	309.6	312.1	318.4	332.2	354.5
62.5°	454.2	422.0	369.3	329.7	305.2	282.2	281.0	280.2	286.0	299.4	319.0
65°	413.5	382.7	331.5	294.0	271.7	250.9	246.4	248.4	254.0	266.3	286.9
67.5°	370.0	342.0	292.9	258.3	238.4	219.8	216.0	216.9	222.7	233.5	251.3
70°	323.7	299.1	253.3	222.3	205.5	188.1	185.7	185.9	191.5	200.8	216.5
72.5°	275.2	253.1	213.4	186.8	172.9	160.4	158.2	155.5	160.6	168.7	182.1
75°	225.9	206.4	173.6	151.9	141.0	130.5	128.5	125.8	130.9	137.8	148.3
77.5°	176.0	160.4	134.9	118.2	109.7	101.9	100.1	97.2	102.3	107.5	115.7
80°	127.3	115.9	100.8	83.1	80.2	75.1	73.3	70.1	75.1	78.4	84.7
82.5°	82.2	74.6	65.9	53.6	53.2	49.4	48.5	44.9	49.4	51.4	56.1
85°	41.6	38.0	35.7	27.3	28.1	25.7	25.5	21.7	25.2	26.1	28.8
87.5°	11.8	12.5	11.2	6.7	8.5	8.0	8.0	5.8	8.0	8.0	9.2
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: P837740

CATALOG NUMBER: ORLG-12-4-INS-ASY2R-LD4-1LO-35-120-EDD

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	957.7	957.7	957.7	957.7	957.7	957.7	957.7	957.7
2.5°	958.6	962.4	963.3	963.1	965.6	979.0	974.5	979.0
5°	960.9	969.4	971.6	974.7	978.7	993.9	989.0	994.4
7.5°	962.2	974.9	979.9	985.9	992.4	1009.3	1005.3	1010.7
10°	962.2	978.7	985.9	995.9	1004.7	1024.3	1020.5	1026.8
12.5°	958.2	979.4	989.5	1003.5	1014.7	1035.9	1034.4	1038.8
15°	949.9	976.1	989.9	1008.0	1021.9	1045.5	1044.9	1050.2
17.5°	938.8	970.3	987.0	1009.8	1027.2	1053.8	1055.4	1058.3
20°	924.7	959.3	981.2	1009.1	1031.0	1060.3	1062.3	1066.3
22.5°	906.1	946.1	972.5	1006.2	1031.5	1063.0	1066.5	1070.3
25°	884.2	930.3	961.1	1000.6	1029.2	1062.7	1067.7	1071.0
27.5°	859.2	909.7	946.6	991.7	1023.0	1059.2	1065.2	1069.2
30°	830.2	887.8	930.0	980.1	1014.5	1052.5	1058.9	1063.0
32.5°	800.2	863.7	910.4	965.1	1002.2	1041.7	1047.3	1050.5
35°	767.6	834.4	886.7	945.9	986.3	1024.5	1028.8	1032.1
37.5°	732.1	802.7	859.7	924.2	964.0	1000.6	1004.4	1008.2
40°	695.5	769.4	829.3	897.6	937.4	971.4	975.4	978.1
42.5°	658.6	732.5	796.9	866.4	905.9	938.5	941.0	943.7
45°	621.3	694.3	760.5	831.7	870.8	901.4	902.3	904.6
47.5°	583.3	654.8	720.5	792.2	830.8	858.8	859.7	861.5
50°	545.1	615.3	677.8	749.5	787.3	816.8	812.7	814.5
52.5°	507.6	573.7	637.6	703.5	740.8	767.0	768.1	764.5
55°	470.7	533.0	591.8	655.2	690.8	711.1	710.4	711.8
57.5°	433.4	491.9	545.8	603.9	638.5	657.7	661.7	657.0
60°	395.4	450.4	498.6	551.1	584.7	600.7	605.4	601.0
62.5°	357.7	408.2	451.9	497.7	528.8	548.7	548.2	543.3
65°	319.9	365.7	404.8	443.7	470.7	490.6	489.7	485.2
67.5°	285.1	322.8	357.9	389.4	412.9	426.5	431.2	425.8
70°	246.6	279.3	310.1	335.3	354.8	367.1	371.5	366.8
72.5°	208.2	235.9	257.6	281.9	296.9	307.2	311.9	307.4
75°	170.2	193.0	210.7	229.7	240.2	248.9	254.2	249.8
77.5°	133.4	151.0	165.1	178.9	191.0	193.0	197.7	194.8
80°	98.3	111.0	121.3	130.5	139.2	140.1	143.9	142.1
82.5°	65.5	73.9	76.6	86.2	91.8	90.9	94.7	93.4
85°	34.6	39.8	44.5	47.4	50.5	47.6	50.9	49.6
87.5°	11.6	12.3	10.7	15.2	16.8	14.3	16.3	15.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)