

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: P838005

Luminaire Tested: **ORLG-24-2-INS-ASY2R-LD4-2STD-40-120-EDD-90**

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-08
Report Number: P838005
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-2-INS-ASY2R-LD4-2STD-40-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

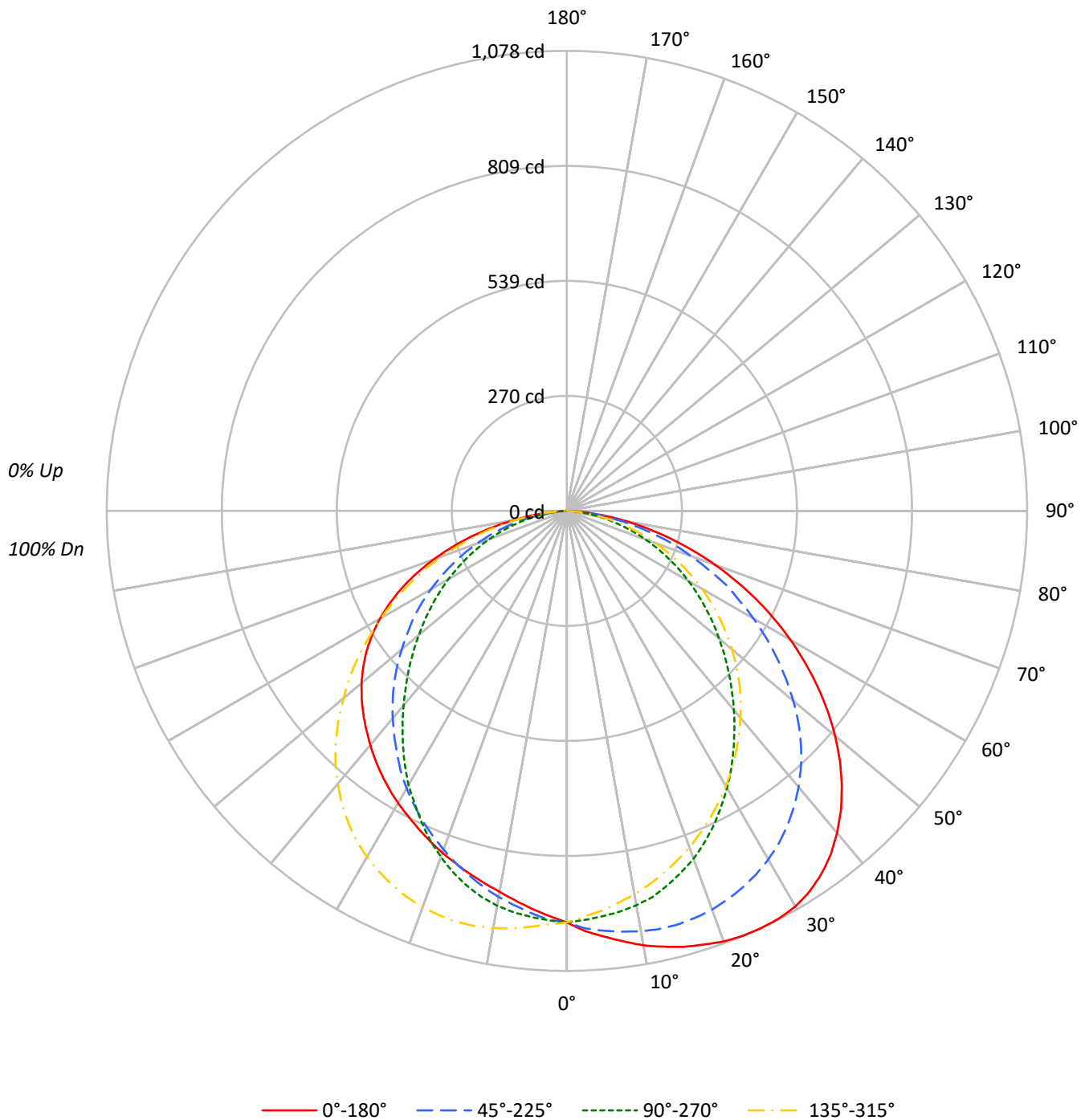
Lumens per Lamp: N/A
Luminaire Lumens: 2829.2 lumens
Efficiency: N/A
Efficacy: 85.0 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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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°	2595	2595	2595	2595
5°	2704	2576	2528	2581
10°	2825	2563	2476	2567
15°	2946	2530	2452	2531
20°	3075	2485	2441	2470
25°	3202	2415	2441	2390
30°	3326	2331	2458	2305
35°	3414	2235	2482	2200
40°	3459	2139	2517	2091
45°	3466	2042	2566	1990
50°	3433	1948	2628	1896
55°	3362	1862	2687	1810
60°	3257	1771	2723	1725
65°	3111	1667	2709	1629
70°	2906	1545	2612	1517
75°	2615	1378	2398	1370
80°	2218	1155	2015	1172
85°	1541	763	1278	784

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.6	3.2
10°-20°	265.1	9.4
20°-30°	406.3	14.4
30°-40°	494.1	17.5
40°-50°	513.6	18.2
50°-60°	463.9	16.4
60°-70°	352.7	12.5
70°-80°	196.6	7.0
80°-90°	45.3	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°	763.0	27.0
0°-40°	1257.1	44.4
0°-60°	2234.6	79.0
0°-90°	2829.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2829.2	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	964	964	964	964	964	
5°	1001	954	936	955	1001	97
15°	1058	908	880	908	1058	300
25°	1078	813	822	805	1078	498
35°	1039	680	756	670	1039	649
45°	911	536	674	523	911	701
55°	717	397	573	386	717	640
65°	489	262	425	256	489	483
75°	252	132	231	132	252	267
85°	50	25	41	25	50	63
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°	964.3	964.3	964.3	964.3	964.3	964.3	964.3	964.3	964.3	964.3	964.3
2.5°	985.7	971.3	971.5	984.1	974.5	979.2	965.7	970.9	969.3	970.4	959.4
5°	1001.2	985.7	985.5	996.3	985.5	987.5	970.4	973.8	968.8	965.7	953.8
7.5°	1017.6	1002.1	1000.6	1010.0	995.8	994.3	975.4	975.4	966.4	958.5	947.2
10°	1033.8	1017.9	1015.8	1023.0	1005.5	1000.3	977.4	973.8	961.9	950.2	938.0
12.5°	1046.0	1029.8	1028.2	1032.7	1012.9	1003.5	977.4	970.4	952.9	936.4	927.0
15°	1057.5	1040.8	1036.5	1038.8	1016.1	1003.5	974.2	963.4	940.9	919.3	908.3
17.5°	1065.6	1049.6	1045.3	1045.1	1017.6	999.7	967.5	952.6	925.6	899.6	888.5
20°	1073.7	1057.7	1052.3	1048.2	1017.2	994.5	957.6	937.6	906.1	876.8	867.6
22.5°	1077.7	1061.3	1055.4	1049.4	1014.3	985.0	945.4	920.0	884.0	849.2	841.5
25°	1078.4	1061.5	1055.2	1046.4	1008.4	973.8	929.7	898.9	858.6	819.9	813.4
27.5°	1076.6	1058.1	1051.8	1041.3	999.7	960.1	911.0	874.8	831.6	788.9	781.9
30°	1070.3	1051.6	1045.5	1031.8	987.3	943.2	890.6	848.0	801.7	756.3	750.2
32.5°	1057.7	1039.5	1034.5	1020.8	973.8	923.6	866.7	819.2	768.6	725.2	716.2
35°	1039.2	1021.0	1017.9	1003.5	954.9	900.2	840.6	787.8	733.5	689.2	680.5
37.5°	1015.2	999.9	995.2	981.0	932.6	873.7	810.7	753.6	697.8	650.1	644.7
40°	984.8	970.4	966.8	954.2	906.8	844.2	778.3	718.2	660.9	616.6	608.9
42.5°	950.2	936.7	934.6	921.6	874.8	811.6	743.2	681.6	622.4	579.7	572.0
45°	910.8	897.8	897.3	884.9	839.9	775.4	706.3	644.5	584.9	540.5	536.5
47.5°	867.4	855.7	855.7	844.2	801.0	735.6	668.3	605.8	547.1	507.9	500.7
50°	820.1	809.1	805.8	800.1	758.1	692.2	628.3	568.0	509.7	472.4	465.4
52.5°	769.8	760.3	762.6	752.2	711.5	646.9	587.8	525.5	472.2	438.2	431.2
55°	716.7	703.2	705.2	701.4	662.9	600.4	542.3	490.4	435.3	403.3	396.8
57.5°	661.6	644.0	651.2	649.0	611.2	552.7	500.7	450.6	398.6	369.1	362.8
60°	605.1	588.2	595.7	593.6	558.1	505.0	457.8	411.2	362.2	335.4	329.1
62.5°	547.1	531.5	538.3	536.7	504.1	456.2	415.0	372.3	325.5	301.4	295.6
65°	488.6	473.7	479.8	478.7	448.5	412.1	371.2	332.0	288.6	267.7	261.8
67.5°	428.7	415.0	420.6	420.6	393.0	358.1	327.1	291.3	252.4	234.4	229.0
70°	369.4	356.5	361.5	361.0	337.6	309.3	282.5	250.6	215.7	200.9	196.4
72.5°	309.5	298.3	302.8	302.3	282.8	264.5	238.0	210.3	180.0	168.0	164.0
75°	251.5	240.9	245.2	244.7	228.8	211.7	193.9	171.0	144.9	136.5	132.5
77.5°	196.2	185.4	189.0	189.0	177.3	164.9	150.7	132.9	114.5	105.5	102.6
80°	143.1	137.9	136.1	136.3	128.4	120.3	113.1	96.1	82.6	76.5	74.5
82.5°	94.0	89.8	88.0	88.4	83.9	79.0	74.5	62.5	53.5	49.9	48.8
85°	49.9	46.8	45.2	46.3	45.4	42.7	40.5	32.4	26.8	25.4	24.7
87.5°	15.7	13.7	12.6	16.6	14.2	12.6	12.1	9.7	7.4	7.4	7.2
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	964.3	964.3	964.3	964.3	964.3	964.3	964.3	964.3	964.3	964.3	964.3
2.5°	963.0	963.0	954.2	952.2	951.3	952.4	943.6	942.1	954.7	950.4	940.7
5°	955.3	954.9	942.5	940.3	940.3	938.9	929.0	926.8	939.4	935.8	925.2
7.5°	945.9	944.5	929.9	928.3	926.1	925.2	914.2	912.6	923.4	921.1	911.2
10°	934.4	933.1	915.7	914.6	912.1	910.3	900.0	898.9	909.9	906.3	898.4
12.5°	919.3	916.9	899.1	898.0	896.0	895.3	885.2	884.7	896.9	893.3	884.9
15°	899.6	897.5	877.7	878.2	878.4	878.4	870.3	869.9	881.8	880.2	871.2
17.5°	877.7	875.0	856.1	857.5	859.1	860.9	854.6	855.7	868.3	866.3	858.2
20°	853.0	850.3	831.8	835.7	839.0	842.6	838.6	841.7	853.4	852.5	846.5
22.5°	825.3	822.6	805.5	811.4	817.0	823.7	821.9	825.5	837.9	837.7	832.3
25°	791.6	792.3	777.2	784.4	793.8	803.3	804.0	809.8	823.5	822.2	817.2
27.5°	760.1	761.0	745.0	757.2	769.8	781.9	784.8	792.9	806.9	805.8	801.5
30°	727.0	728.1	712.6	729.3	744.6	759.4	765.7	776.7	790.9	790.9	786.4
32.5°	692.6	694.6	678.4	700.7	718.5	735.8	746.8	758.3	774.5	774.0	770.2
35°	657.3	659.5	644.7	673.0	690.8	711.9	725.7	741.0	755.4	755.6	752.7
37.5°	621.3	624.0	610.5	641.5	661.8	686.8	704.3	719.6	735.6	736.5	733.8
40°	585.5	588.5	576.8	606.7	632.3	660.2	680.5	698.5	716.0	716.4	714.6
42.5°	549.8	552.9	544.1	573.4	602.4	632.3	656.2	676.6	694.6	695.8	693.7
45°	514.9	517.6	511.3	543.2	571.1	603.8	631.2	654.4	672.6	674.2	673.5
47.5°	480.3	482.7	477.1	506.3	538.5	573.2	604.9	630.5	649.9	651.7	651.2
50°	446.3	448.3	442.2	472.8	504.8	541.7	574.7	604.4	626.0	627.8	627.6
52.5°	412.5	414.6	409.4	441.6	470.6	509.5	545.5	577.7	599.0	601.7	602.2
55°	379.9	380.8	376.8	407.6	435.7	476.4	517.8	549.1	570.5	572.7	574.1
57.5°	347.3	347.5	344.2	373.6	400.6	442.2	485.7	518.5	538.7	541.0	543.0
60°	314.9	314.7	310.9	339.4	365.3	406.5	451.7	484.3	503.9	505.9	508.6
62.5°	282.8	282.1	278.7	305.0	329.3	370.0	415.5	447.0	465.6	467.0	470.6
65°	250.8	250.1	247.0	271.3	293.3	332.2	376.8	406.7	423.6	425.4	424.7
67.5°	219.3	218.0	215.5	237.3	257.3	293.3	336.1	364.6	378.6	380.2	384.4
70°	187.8	186.3	180.6	203.8	221.3	253.5	293.3	318.7	330.4	332.0	331.3
72.5°	156.8	155.2	149.1	170.5	185.4	213.5	249.0	270.2	280.3	281.6	281.6
75°	126.6	125.7	121.9	138.1	150.5	173.4	203.6	221.1	229.0	230.6	230.1
77.5°	97.6	97.0	93.1	107.1	116.7	133.8	158.1	171.9	177.7	179.5	183.3
80°	70.0	69.7	63.7	77.4	81.7	96.1	113.8	124.4	127.5	130.0	132.7
82.5°	44.8	45.0	38.9	50.6	52.4	61.6	72.7	79.2	81.4	83.5	85.5
85°	21.8	22.7	19.3	26.8	27.0	31.7	36.4	38.9	39.8	41.4	43.2
87.5°	5.6	6.5	3.6	7.6	6.7	8.8	10.1	10.8	10.6	11.7	12.4
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	964.3	964.3	964.3	964.3	964.3	964.3	964.3	964.3	964.3	964.3	964.3
2.5°	943.9	951.1	947.5	959.2	963.7	956.5	969.1	969.3	960.3	970.9	976.7
5°	929.2	936.7	934.4	946.6	952.2	945.9	961.2	964.1	955.3	967.3	976.7
7.5°	914.4	923.2	920.2	932.6	939.4	934.4	950.8	955.6	948.8	961.9	974.5
10°	901.6	909.0	905.9	918.9	924.7	920.7	936.9	945.7	939.4	955.3	970.4
12.5°	889.0	895.1	891.5	902.3	907.9	902.7	922.5	930.6	926.1	942.7	962.1
15°	872.8	879.5	874.6	884.3	888.5	884.0	900.2	914.2	908.5	926.8	948.1
17.5°	860.4	864.2	857.5	865.1	867.6	861.5	878.0	891.7	887.6	907.4	932.2
20°	846.7	849.8	840.4	844.7	844.4	836.8	851.9	865.4	862.7	884.5	912.6
22.5°	831.4	833.0	821.9	822.8	822.4	809.8	823.3	837.0	835.9	857.9	889.4
25°	815.2	815.4	801.3	800.8	795.9	781.0	792.9	808.4	805.1	828.9	862.0
27.5°	799.2	797.0	779.9	775.8	768.0	750.2	760.8	774.7	772.7	796.1	832.7
30°	782.1	779.2	758.3	750.9	739.4	718.9	727.7	740.7	741.9	762.3	800.8
32.5°	765.9	758.5	735.3	724.5	710.1	686.3	691.0	704.3	706.1	726.8	766.4
35°	745.0	740.1	711.5	693.1	678.9	652.8	657.7	667.0	669.7	689.9	730.2
37.5°	725.2	717.3	687.0	664.5	646.3	618.8	620.2	629.6	632.3	652.8	692.6
40°	704.8	693.5	660.9	634.6	613.6	584.9	583.3	593.2	595.2	615.2	651.2
42.5°	682.9	669.4	632.8	604.0	579.9	550.7	547.5	556.1	558.3	577.9	613.2
45°	660.9	644.7	604.0	572.5	546.2	516.2	513.1	519.6	523.0	541.4	575.4
47.5°	637.5	618.6	574.3	539.2	512.0	482.1	478.2	484.8	487.5	505.7	537.8
50°	613.0	590.0	543.7	505.0	478.0	448.5	442.9	450.6	453.0	470.1	501.6
52.5°	586.0	560.6	511.1	470.6	443.6	415.5	408.7	416.1	419.1	435.7	464.7
55°	557.4	530.0	478.2	438.9	409.6	382.2	376.6	379.5	385.8	401.5	428.5
57.5°	525.2	498.0	443.6	403.6	375.4	349.1	344.4	347.1	352.9	368.2	392.5
60°	491.1	462.3	408.3	368.2	341.0	316.0	311.8	314.2	320.5	334.5	357.0
62.5°	457.3	424.9	371.8	332.0	307.3	284.1	283.0	282.1	287.9	301.4	321.2
65°	416.4	385.3	333.8	296.0	273.5	252.6	248.1	250.1	255.8	268.1	288.8
67.5°	372.5	344.4	294.9	260.0	240.0	221.3	217.5	218.4	224.3	235.1	253.1
70°	325.9	301.2	255.1	223.8	206.9	189.4	186.9	187.2	192.8	202.2	218.0
72.5°	277.1	254.9	214.8	188.1	174.1	161.5	159.3	156.6	161.7	169.8	183.3
75°	227.4	207.8	174.8	153.0	141.9	131.4	129.3	126.6	131.8	138.8	149.4
77.5°	177.3	161.5	135.9	119.0	110.4	102.6	100.8	97.9	103.0	108.2	116.5
80°	128.2	116.7	101.4	83.7	80.8	75.6	73.8	70.6	75.6	79.0	85.3
82.5°	82.8	75.1	66.4	54.0	53.5	49.7	48.8	45.2	49.7	51.7	56.5
85°	41.8	38.2	36.0	27.4	28.3	25.9	25.6	21.8	25.4	26.3	29.0
87.5°	11.9	12.6	11.2	6.7	8.5	8.1	8.1	5.8	8.1	8.1	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: P838005

CATALOG NUMBER: ORLG-24-2-INS-ASY2R-LD4-2STD-40-120-EDD-90

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	964.3	964.3	964.3	964.3	964.3	964.3	964.3	964.3
2.5°	965.2	969.1	970.0	969.7	972.2	985.7	981.2	985.7
5°	967.5	976.0	978.3	981.4	985.5	1000.8	995.8	1001.2
7.5°	968.8	981.7	986.6	992.7	999.2	1016.3	1012.2	1017.6
10°	968.8	985.5	992.7	1002.8	1011.6	1031.4	1027.5	1033.8
12.5°	964.8	986.2	996.3	1010.4	1021.7	1043.1	1041.5	1046.0
15°	956.5	982.8	996.7	1014.9	1028.9	1052.7	1052.1	1057.5
17.5°	945.2	976.9	993.8	1016.7	1034.3	1061.1	1062.6	1065.6
20°	931.0	965.9	988.0	1016.1	1038.1	1067.6	1069.6	1073.7
22.5°	912.4	952.6	979.2	1013.1	1038.6	1070.3	1073.9	1077.7
25°	890.3	936.7	967.7	1007.5	1036.3	1070.1	1075.0	1078.4
27.5°	865.1	916.0	953.1	998.5	1030.0	1066.5	1072.5	1076.6
30°	835.9	893.9	936.4	986.8	1021.5	1059.7	1066.2	1070.3
32.5°	805.8	869.6	916.6	971.8	1009.1	1048.9	1054.5	1057.7
35°	772.9	840.2	892.8	952.4	993.1	1031.6	1035.9	1039.2
37.5°	737.1	808.2	865.6	930.6	970.6	1007.5	1011.3	1015.2
40°	700.3	774.7	835.0	903.8	943.9	978.1	982.1	984.8
42.5°	663.1	737.6	802.4	872.3	912.1	945.0	947.5	950.2
45°	625.6	699.1	765.7	837.5	876.8	907.7	908.5	910.8
47.5°	587.3	659.3	725.4	797.7	836.6	864.7	865.6	867.4
50°	548.9	619.5	682.5	754.7	792.7	822.4	818.3	820.1
52.5°	511.1	577.7	642.0	708.3	745.9	772.2	773.4	769.8
55°	474.0	536.7	595.9	659.8	695.5	716.0	715.3	716.7
57.5°	436.4	495.3	549.5	608.0	642.9	662.2	666.3	661.6
60°	398.2	453.5	502.1	554.9	588.7	604.9	609.6	605.1
62.5°	360.1	411.0	455.1	501.2	532.4	552.5	552.0	547.1
65°	322.1	368.2	407.6	446.7	474.0	494.0	493.1	488.6
67.5°	287.0	325.0	360.4	392.1	415.7	429.4	434.1	428.7
70°	248.3	281.2	312.2	337.6	357.2	369.6	374.1	369.4
72.5°	209.6	237.5	259.4	283.9	299.0	309.3	314.0	309.5
75°	171.4	194.4	212.1	231.2	241.8	250.6	256.0	251.5
77.5°	134.3	152.1	166.2	180.2	192.3	194.4	199.1	196.2
80°	99.0	111.8	122.1	131.4	140.1	141.0	144.9	143.1
82.5°	65.9	74.5	77.2	86.8	92.5	91.6	95.4	94.0
85°	34.9	40.0	44.8	47.7	50.8	47.9	51.3	49.9
87.5°	11.7	12.4	10.8	15.3	16.9	14.4	16.4	15.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)