

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: P838025

Luminaire Tested: **ORLG-24-2-INS-ASY2R-LD4-3LO-50-120-EDD-90**

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-08
Report Number: P838025
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-LD4-3LO-50-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

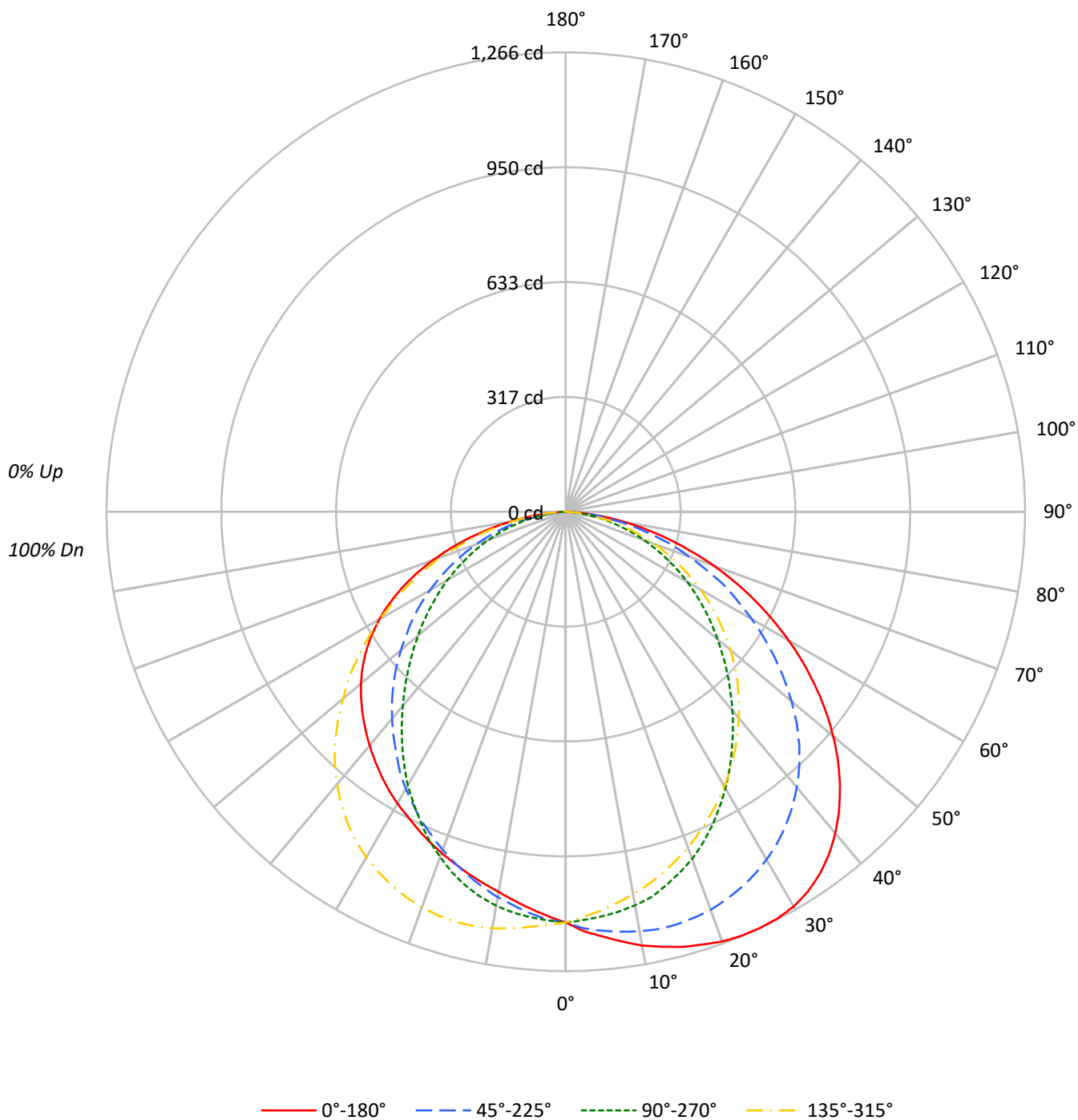
Lumens per Lamp: N/A
Luminaire Lumens: 3321.1 lumens
Efficiency: N/A
Efficacy: 94.6 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 35.1
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°	3046	3046	3046	3046
5°	3175	3024	2967	3029
10°	3316	3009	2907	3013
15°	3458	2970	2878	2971
20°	3609	2916	2866	2900
25°	3758	2835	2866	2806
30°	3904	2736	2885	2706
35°	4007	2624	2914	2582
40°	4061	2511	2954	2454
45°	4069	2397	3012	2336
50°	4030	2287	3085	2226
55°	3947	2185	3154	2124
60°	3823	2079	3196	2025
65°	3652	1957	3179	1911
70°	3412	1814	3066	1781
75°	3069	1617	2815	1608
80°	2602	1354	2365	1375
85°	1809	895	1501	920

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.5	3.2
10°-20°	311.2	9.4
20°-30°	477.0	14.4
30°-40°	579.9	17.5
40°-50°	602.9	18.2
50°-60°	544.6	16.4
60°-70°	414.0	12.5
70°-80°	230.8	7.0
80°-90°	53.1	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°	895.6	27.0
0°-40°	1475.6	44.4
0°-60°	2623.1	79.0
0°-90°	3321.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3321.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1132	1132	1132	1132	1132	
5°	1175	1120	1098	1121	1175	113
15°	1241	1066	1033	1066	1241	352
25°	1266	955	965	945	1266	585
35°	1220	799	887	786	1220	762
45°	1069	630	791	614	1069	823
55°	841	466	672	453	841	751
65°	574	307	499	300	574	567
75°	295	156	271	155	295	314
85°	59	29	49	30	59	74
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°	1132.0	1132.0	1132.0	1132.0	1132.0	1132.0	1132.0	1132.0	1132.0	1132.0	1132.0
2.5°	1157.1	1140.2	1140.4	1155.2	1143.9	1149.4	1133.6	1139.6	1137.8	1139.1	1126.2
5°	1175.3	1157.1	1156.8	1169.5	1156.8	1159.2	1139.1	1143.1	1137.3	1133.6	1119.6
7.5°	1194.6	1176.3	1174.5	1185.6	1168.9	1167.1	1144.9	1144.9	1134.4	1125.1	1111.9
10°	1213.6	1194.8	1192.4	1200.9	1180.3	1174.2	1147.3	1143.1	1129.1	1115.3	1101.1
12.5°	1227.8	1208.8	1207.0	1212.2	1189.0	1177.9	1147.3	1139.1	1118.5	1099.2	1088.1
15°	1241.3	1221.8	1216.7	1219.4	1192.7	1177.9	1143.6	1130.9	1104.5	1079.2	1066.2
17.5°	1250.8	1232.1	1227.0	1226.8	1194.6	1173.4	1135.7	1118.2	1086.6	1055.9	1043.0
20°	1260.3	1241.6	1235.2	1230.5	1194.0	1167.4	1124.1	1100.6	1063.6	1029.3	1018.4
22.5°	1265.1	1245.8	1238.9	1231.8	1190.6	1156.3	1109.8	1080.0	1037.7	996.8	987.8
25°	1265.8	1246.0	1238.7	1228.4	1183.7	1143.1	1091.3	1055.1	1007.9	962.5	954.8
27.5°	1263.7	1242.1	1234.7	1222.3	1173.4	1127.0	1069.4	1026.9	976.2	926.0	917.8
30°	1256.3	1234.4	1227.3	1211.2	1158.9	1107.2	1045.4	995.5	941.1	887.7	880.6
32.5°	1241.6	1220.2	1214.4	1198.3	1143.1	1084.2	1017.4	961.7	902.3	851.3	840.7
35°	1219.9	1198.5	1194.8	1177.9	1120.9	1056.7	986.8	924.7	861.1	809.0	798.7
37.5°	1191.7	1173.7	1168.2	1151.5	1094.7	1025.6	951.6	884.6	819.1	763.1	756.8
40°	1156.0	1139.1	1134.9	1120.1	1064.4	991.0	913.6	843.1	775.8	723.8	714.8
42.5°	1115.3	1099.5	1097.1	1081.8	1026.9	952.7	872.4	800.1	730.6	680.5	671.5
45°	1069.1	1053.8	1053.3	1038.8	986.0	910.2	829.1	756.5	686.5	634.5	629.8
47.5°	1018.2	1004.4	1004.4	991.0	940.3	863.4	784.5	711.1	642.2	596.2	587.8
50°	962.7	949.8	945.8	939.2	889.8	812.5	737.5	666.7	598.3	554.5	546.3
52.5°	903.6	892.5	895.1	883.0	835.2	759.4	690.0	616.8	554.2	514.4	506.2
55°	841.3	825.4	827.8	823.3	778.2	704.7	636.6	575.6	510.9	473.4	465.8
57.5°	776.6	756.0	764.4	761.8	717.4	648.8	587.8	528.9	467.9	433.3	425.9
60°	710.3	690.5	699.2	696.8	655.1	592.8	537.3	482.7	425.1	393.7	386.3
62.5°	642.2	623.9	631.9	630.0	591.7	535.5	487.2	437.0	382.1	353.8	347.0
65°	573.5	556.1	563.2	561.9	526.5	483.7	435.7	389.7	338.8	314.2	307.4
67.5°	503.3	487.2	493.8	493.8	461.3	420.4	383.9	341.9	296.3	275.1	268.8
70°	433.6	418.5	424.3	423.8	396.3	363.1	331.6	294.2	253.2	235.8	230.5
72.5°	363.3	350.1	355.4	354.9	331.9	310.5	279.4	246.9	211.2	197.2	192.5
75°	295.2	282.8	287.8	287.3	268.5	248.5	227.6	200.7	170.0	160.3	155.5
77.5°	230.3	217.6	221.8	221.8	208.1	193.5	176.9	156.1	134.4	123.8	120.4
80°	167.9	161.9	159.7	160.0	150.8	141.3	132.8	112.7	96.9	89.8	87.4
82.5°	110.4	105.4	103.2	103.8	98.5	92.7	87.4	73.4	62.8	58.6	57.3
85°	58.6	54.9	53.1	54.4	53.3	50.2	47.5	38.0	31.4	29.8	29.0
87.5°	18.5	16.1	14.8	19.5	16.6	14.8	14.3	11.4	8.7	8.7	8.4
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°	1132.0	1132.0	1132.0	1132.0	1132.0	1132.0	1132.0	1132.0	1132.0	1132.0	1132.0
2.5°	1130.4	1130.4	1120.1	1117.7	1116.7	1118.0	1107.7	1105.8	1120.6	1115.6	1104.3
5°	1121.4	1120.9	1106.4	1103.7	1103.7	1102.1	1090.5	1087.9	1102.7	1098.4	1086.0
7.5°	1110.3	1108.7	1091.6	1089.7	1087.1	1086.0	1073.1	1071.2	1083.9	1081.3	1069.7
10°	1096.9	1095.3	1074.9	1073.6	1070.7	1068.6	1056.5	1055.1	1068.1	1063.9	1054.6
12.5°	1079.2	1076.3	1055.4	1054.1	1051.7	1050.9	1039.0	1038.5	1052.8	1048.5	1038.8
15°	1055.9	1053.6	1030.3	1030.8	1031.1	1031.1	1021.6	1021.1	1035.1	1033.2	1022.7
17.5°	1030.3	1027.1	1005.0	1006.6	1008.4	1010.5	1003.1	1004.4	1019.2	1016.9	1007.3
20°	1001.3	998.1	976.5	980.9	984.9	989.1	984.4	988.1	1001.8	1000.7	993.6
22.5°	968.8	965.6	945.6	952.4	959.0	966.9	964.8	969.1	983.6	983.3	977.0
25°	929.2	930.0	912.3	920.7	931.8	942.9	943.7	950.6	966.7	965.1	959.3
27.5°	892.2	893.3	874.5	888.8	903.6	917.8	921.3	930.8	947.1	945.8	940.8
30°	853.4	854.7	836.5	856.0	874.0	891.4	898.8	911.8	928.4	928.4	923.1
32.5°	813.0	815.4	796.4	822.5	843.4	863.7	876.6	890.1	909.1	908.6	904.1
35°	771.6	774.2	756.8	790.0	810.9	835.7	851.8	869.8	886.7	886.9	883.5
37.5°	729.3	732.5	716.6	753.1	776.8	806.1	826.7	844.7	863.4	864.5	861.3
40°	687.3	690.8	677.0	712.1	742.2	775.0	798.7	819.9	840.5	841.0	838.9
42.5°	645.3	649.0	638.7	673.1	707.1	742.2	770.2	794.3	815.4	816.7	814.3
45°	604.4	607.6	600.2	637.7	670.4	708.7	740.9	768.1	789.5	791.4	790.6
47.5°	563.7	566.6	560.0	594.4	632.1	672.8	710.0	740.1	762.8	764.9	764.4
50°	523.9	526.2	519.1	555.0	592.5	635.8	674.6	709.5	734.8	737.0	736.7
52.5°	484.3	486.6	480.6	518.3	552.4	598.1	640.3	678.1	703.2	706.3	706.9
55°	446.0	447.0	442.3	478.5	511.5	559.3	607.8	644.5	669.6	672.3	673.9
57.5°	407.7	408.0	404.0	438.6	470.3	519.1	570.1	608.6	632.4	635.0	637.4
60°	369.7	369.4	364.9	398.4	428.8	477.1	530.2	568.5	591.5	593.8	597.0
62.5°	331.9	331.1	327.2	358.1	386.6	434.4	487.7	524.7	546.6	548.2	552.4
65°	294.4	293.6	289.9	318.4	344.3	390.0	442.3	477.4	497.2	499.3	498.5
67.5°	257.4	255.9	253.0	278.6	302.1	344.3	394.5	428.0	444.4	446.2	451.3
70°	220.5	218.6	212.0	239.2	259.8	297.6	344.3	374.2	387.9	389.7	388.9
72.5°	184.0	182.2	175.1	200.1	217.6	250.6	292.3	317.1	329.0	330.6	330.6
75°	148.7	147.6	143.1	162.1	176.6	203.6	239.0	259.6	268.8	270.7	270.1
77.5°	114.6	113.8	109.3	125.7	137.0	157.1	185.6	201.7	208.6	210.7	215.2
80°	82.1	81.9	74.7	90.8	95.8	112.7	133.6	146.0	149.7	152.6	155.8
82.5°	52.5	52.8	45.7	59.4	61.5	72.3	85.3	92.9	95.6	98.0	100.3
85°	25.6	26.7	22.7	31.4	31.7	37.2	42.8	45.7	46.7	48.6	50.7
87.5°	6.6	7.7	4.2	9.0	7.9	10.3	11.9	12.7	12.4	13.7	14.5
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°	1132.0	1132.0	1132.0	1132.0	1132.0	1132.0	1132.0	1132.0	1132.0	1132.0	1132.0
2.5°	1107.9	1116.4	1112.2	1125.9	1131.2	1122.7	1137.5	1137.8	1127.2	1139.6	1146.5
5°	1090.8	1099.5	1096.9	1111.1	1117.7	1110.3	1128.3	1131.7	1121.4	1135.4	1146.5
7.5°	1073.4	1083.7	1080.2	1094.7	1102.7	1096.9	1116.1	1121.7	1113.8	1129.1	1143.9
10°	1058.3	1067.0	1063.3	1078.6	1085.5	1080.8	1099.8	1110.1	1102.7	1121.4	1139.1
12.5°	1043.5	1050.7	1046.4	1059.1	1065.7	1059.6	1082.9	1092.4	1087.1	1106.6	1129.3
15°	1024.5	1032.4	1026.6	1038.0	1043.0	1037.7	1056.7	1073.1	1066.5	1087.9	1113.0
17.5°	1010.0	1014.5	1006.6	1015.5	1018.4	1011.3	1030.6	1046.7	1041.9	1065.2	1094.2
20°	993.9	997.6	986.5	991.5	991.2	982.3	1000.0	1015.8	1012.6	1038.2	1071.2
22.5°	975.9	977.8	964.8	965.9	965.4	950.6	966.4	982.5	981.2	1007.1	1044.0
25°	956.9	957.2	940.5	940.0	934.2	916.8	930.8	949.0	945.0	973.0	1011.8
27.5°	938.2	935.5	915.5	910.7	901.5	880.6	893.0	909.4	907.0	934.5	977.5
30°	918.1	914.7	890.1	881.4	867.9	843.9	854.2	869.5	870.8	894.9	940.0
32.5°	899.1	890.4	863.2	850.5	833.6	805.6	811.2	826.7	828.8	853.1	899.6
35°	874.5	868.7	835.2	813.5	796.9	766.3	772.1	782.9	786.1	809.8	857.1
37.5°	851.3	842.1	806.4	780.0	758.6	726.4	728.0	739.1	742.2	766.3	813.0
40°	827.3	814.1	775.8	744.9	720.3	686.5	684.7	696.3	698.7	722.2	764.4
42.5°	801.7	785.8	742.8	709.0	680.7	646.4	642.7	652.7	655.4	678.3	719.8
45°	775.8	756.8	709.0	672.0	641.1	606.0	602.3	610.0	613.9	635.6	675.4
47.5°	748.3	726.1	674.1	632.9	601.0	565.9	561.4	569.0	572.2	593.6	631.3
50°	719.5	692.6	638.2	592.8	561.1	526.5	519.9	528.9	531.8	551.9	588.8
52.5°	687.8	658.0	599.9	552.4	520.7	487.7	479.8	488.5	491.9	511.5	545.5
55°	654.3	622.1	561.4	515.2	480.8	448.6	442.0	445.5	452.8	471.3	503.0
57.5°	616.6	584.6	520.7	473.7	440.7	409.8	404.3	407.4	414.3	432.2	460.8
60°	576.4	542.6	479.2	432.2	400.3	371.0	366.0	368.9	376.3	392.6	419.0
62.5°	536.8	498.8	436.5	389.7	360.7	333.5	332.2	331.1	338.0	353.8	377.1
65°	488.8	452.3	391.8	347.5	321.1	296.5	291.2	293.6	300.2	314.7	339.0
67.5°	437.3	404.3	346.2	305.2	281.7	259.8	255.3	256.4	263.3	275.9	297.1
70°	382.6	353.6	299.4	262.7	242.9	222.3	219.4	219.7	226.3	237.4	255.9
72.5°	325.3	299.2	252.2	220.7	204.4	189.6	186.9	183.8	189.9	199.4	215.2
75°	267.0	244.0	205.2	179.6	166.6	154.2	151.8	148.7	154.7	162.9	175.3
77.5°	208.1	189.6	159.5	139.7	129.6	120.4	118.3	114.9	120.9	127.0	136.8
80°	150.5	137.0	119.1	98.2	94.8	88.7	86.6	82.9	88.7	92.7	100.1
82.5°	97.2	88.2	77.9	63.4	62.8	58.4	57.3	53.1	58.4	60.7	66.3
85°	49.1	44.9	42.2	32.2	33.3	30.4	30.1	25.6	29.8	30.9	34.1
87.5°	14.0	14.8	13.2	7.9	10.0	9.5	9.5	6.9	9.5	9.5	10.8
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: P838025

CATALOG NUMBER: ORLG-24-2-INS-ASY2R-LD4-3LO-50-120-EDD-90

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	1132.0	1132.0	1132.0	1132.0	1132.0	1132.0	1132.0	1132.0
2.5°	1133.0	1137.5	1138.6	1138.3	1141.2	1157.1	1151.8	1157.1
5°	1135.7	1145.7	1148.3	1152.0	1156.8	1174.8	1168.9	1175.3
7.5°	1137.3	1152.3	1158.1	1165.2	1172.9	1193.0	1188.2	1194.6
10°	1137.3	1156.8	1165.2	1177.1	1187.4	1210.7	1206.2	1213.6
12.5°	1132.5	1157.6	1169.5	1186.1	1199.3	1224.4	1222.5	1227.8
15°	1122.7	1153.6	1170.0	1191.4	1207.8	1235.7	1235.0	1241.3
17.5°	1109.5	1146.8	1166.6	1193.5	1214.1	1245.5	1247.4	1250.8
20°	1092.9	1133.8	1159.7	1192.7	1218.6	1253.2	1255.6	1260.3
22.5°	1071.0	1118.2	1149.4	1189.3	1219.1	1256.3	1260.6	1265.1
25°	1045.1	1099.5	1135.9	1182.7	1216.5	1256.1	1261.9	1265.8
27.5°	1015.5	1075.2	1118.8	1172.1	1209.1	1251.9	1259.0	1263.7
30°	981.2	1049.3	1099.2	1158.4	1199.0	1243.9	1251.6	1256.3
32.5°	945.8	1020.8	1076.0	1140.7	1184.5	1231.3	1237.9	1241.6
35°	907.3	986.2	1048.0	1118.0	1165.8	1210.9	1215.9	1219.9
37.5°	865.3	948.7	1016.1	1092.4	1139.4	1182.7	1187.2	1191.7
40°	822.0	909.4	980.1	1060.9	1107.9	1148.1	1152.8	1156.0
42.5°	778.4	865.8	941.9	1024.0	1070.7	1109.3	1112.2	1115.3
45°	734.3	820.7	898.8	983.1	1029.3	1065.4	1066.5	1069.1
47.5°	689.4	773.9	851.6	936.3	982.0	1015.0	1016.1	1018.2
50°	644.3	727.2	801.1	885.9	930.5	965.4	960.6	962.7
52.5°	599.9	678.1	753.6	831.5	875.6	906.5	907.8	903.6
55°	556.4	630.0	699.5	774.5	816.4	840.5	839.7	841.3
57.5°	512.3	581.4	645.1	713.7	754.7	777.4	782.1	776.6
60°	467.4	532.3	589.4	651.4	691.0	710.0	715.6	710.3
62.5°	422.7	482.4	534.2	588.3	625.0	648.5	648.0	642.2
65°	378.1	432.2	478.5	524.4	556.4	579.9	578.8	573.5
67.5°	336.9	381.6	423.0	460.2	488.0	504.1	509.6	503.3
70°	291.5	330.1	366.5	396.3	419.3	433.8	439.1	433.6
72.5°	246.1	278.8	304.4	333.2	350.9	363.1	368.6	363.3
75°	201.2	228.1	249.0	271.4	283.9	294.2	300.5	295.2
77.5°	157.6	178.5	195.1	211.5	225.8	228.1	233.7	230.3
80°	116.2	131.2	143.4	154.2	164.5	165.6	170.0	167.9
82.5°	77.4	87.4	90.6	101.9	108.5	107.5	112.0	110.4
85°	40.9	47.0	52.5	56.0	59.7	56.2	60.2	58.6
87.5°	13.7	14.5	12.7	18.0	19.8	16.9	19.3	18.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)