

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: P838081

Luminaire Tested: **ORLG-24-4-INS-ASY2R-LD4-3HI-30-120-EDD**

Issue Date: 5/21/2024



Test Information

Test Method: LM-79-08
Report Number: P838081
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/21/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-ASY2R-LD4-3HI-30-120-EDD
Description: 2FT 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

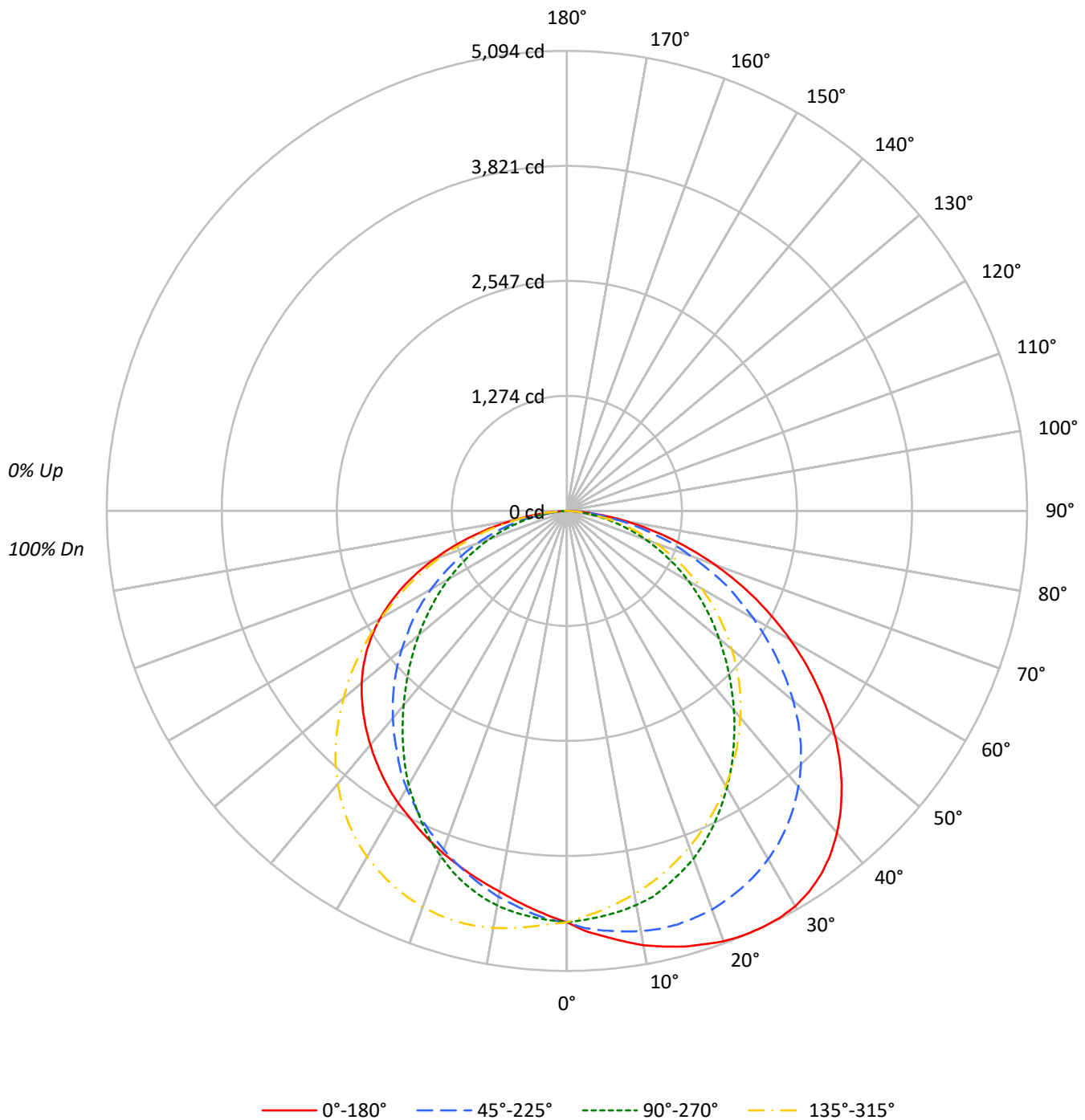
Lumens per Lamp: N/A
Luminaire Lumens: 13364.1 lumens
Efficiency: N/A
Efficacy: 101.2 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 132
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°	6129	6129	6129	6129
5°	6388	6085	5970	6095
10°	6672	6054	5849	6062
15°	6958	5976	5791	5978
20°	7262	5868	5766	5834
25°	7562	5704	5766	5646
30°	7855	5505	5804	5444
35°	8063	5279	5862	5196
40°	8170	5052	5944	4938
45°	8186	4822	6059	4701
50°	8109	4602	6207	4479
55°	7941	4397	6346	4275
60°	7691	4183	6431	4074
65°	7347	3938	6397	3846
70°	6864	3649	6170	3582
75°	6175	3253	5662	3237
80°	5236	2725	4758	2766
85°	3642	1805	3018	1854

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	432.5	3.2
10°-20°	1252.4	9.4
20°-30°	1919.3	14.4
30°-40°	2333.7	17.5
40°-50°	2426.0	18.2
50°-60°	2191.4	16.4
60°-70°	1666.1	12.5
70°-80°	928.8	7.0
80°-90°	213.9	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°	3604.1	27.0
0°-40°	5937.8	44.4
0°-60°	10555.3	79.0
0°-90°	13364.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13364.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	4555	4555	4555	4555	4555	
5°	4729	4505	4420	4513	4729	456
15°	4995	4290	4158	4292	4995	1416
25°	5094	3842	3884	3803	5094	2353
35°	4909	3214	3569	3163	4909	3066
45°	4302	2534	3184	2470	4302	3312
55°	3385	1874	2705	1822	3385	3022
65°	2308	1237	2009	1208	2308	2281
75°	1188	626	1089	623	1188	1262
85°	236	117	196	120	236	297
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°	4555.1	4555.1	4555.1	4555.1	4555.1	4555.1	4555.1	4555.1	4555.1	4555.1	4555.1
2.5°	4656.0	4588.0	4589.1	4648.6	4602.9	4625.2	4561.5	4585.9	4578.5	4583.8	4531.7
5°	4729.4	4656.0	4655.0	4706.0	4655.0	4664.5	4583.8	4599.7	4576.4	4561.5	4505.2
7.5°	4806.9	4733.6	4726.2	4770.8	4703.9	4696.4	4607.2	4607.2	4564.7	4527.5	4474.4
10°	4883.4	4808.0	4798.4	4832.4	4749.6	4725.1	4616.7	4599.7	4543.4	4488.2	4430.8
12.5°	4940.8	4864.3	4856.9	4878.1	4784.6	4740.0	4616.7	4583.8	4500.9	4423.4	4378.7
15°	4995.0	4916.4	4896.2	4906.8	4799.5	4740.0	4601.9	4550.9	4444.6	4342.6	4290.5
17.5°	5033.3	4957.8	4937.6	4936.6	4806.9	4721.9	4570.0	4499.9	4372.4	4249.1	4197.0
20°	5071.5	4996.1	4970.6	4951.4	4804.8	4697.5	4523.2	4428.7	4279.9	4141.8	4098.2
22.5°	5090.6	5013.1	4985.4	4956.7	4791.0	4652.9	4465.9	4345.8	4175.8	4011.1	3975.0
25°	5093.8	5014.1	4984.4	4942.9	4763.4	4599.7	4391.5	4245.9	4055.7	3873.0	3842.1
27.5°	5085.3	4998.2	4968.4	4918.5	4721.9	4534.9	4303.3	4132.2	3928.2	3726.3	3693.4
30°	5055.6	4967.4	4938.7	4873.9	4663.5	4455.2	4206.6	4005.8	3786.9	3572.3	3543.6
32.5°	4996.1	4910.0	4886.6	4821.8	4599.7	4362.8	4094.0	3869.8	3630.7	3425.6	3383.1
35°	4908.9	4822.9	4808.0	4740.0	4510.5	4252.3	3970.7	3721.0	3464.9	3255.6	3214.2
37.5°	4795.2	4723.0	4700.7	4633.7	4405.3	4126.9	3829.4	3559.5	3296.0	3070.7	3045.2
40°	4651.8	4583.8	4566.8	4507.3	4283.1	3987.7	3676.4	3392.7	3121.7	2912.4	2876.3
42.5°	4488.2	4424.4	4414.9	4353.2	4132.2	3833.6	3510.6	3219.5	2940.0	2738.2	2702.0
45°	4302.2	4240.6	4238.5	4180.0	3967.5	3662.6	3336.4	3044.2	2762.6	2553.3	2534.2
47.5°	4097.2	4041.9	4041.9	3987.7	3783.7	3474.5	3156.8	2861.4	2584.1	2399.2	2365.2
50°	3874.0	3822.0	3806.0	3779.5	3580.8	3269.4	2967.7	2682.9	2407.7	2231.3	2198.4
52.5°	3636.0	3591.4	3602.0	3553.1	3360.8	3055.9	2776.4	2482.1	2230.3	2069.8	2036.9
55°	3385.3	3321.5	3331.1	3313.0	3131.3	2835.9	2561.8	2316.3	2056.0	1905.1	1874.3
57.5°	3124.9	3042.1	3076.1	3065.4	2886.9	2610.7	2365.2	2128.3	1882.8	1743.6	1713.9
60°	2858.2	2778.5	2813.6	2804.0	2636.2	2385.4	2162.3	1942.3	1710.7	1584.2	1554.5
62.5°	2584.1	2510.8	2542.7	2535.2	2381.2	2154.8	1960.4	1758.5	1537.5	1423.8	1396.2
65°	2307.8	2237.7	2266.4	2261.1	2118.7	1946.6	1753.2	1568.3	1363.2	1264.4	1236.8
67.5°	2025.2	1960.4	1986.9	1986.9	1856.3	1691.6	1544.9	1376.0	1192.2	1107.2	1081.7
70°	1744.7	1684.1	1707.5	1705.4	1594.9	1461.0	1334.5	1183.7	1019.0	948.8	927.6
72.5°	1462.1	1408.9	1430.2	1428.1	1335.6	1249.5	1124.2	993.5	850.0	793.7	774.6
75°	1187.9	1138.0	1158.2	1156.0	1080.6	999.8	915.9	807.5	684.3	645.0	625.8
77.5°	926.5	875.5	892.5	892.5	837.3	778.8	711.9	628.0	540.8	498.3	484.5
80°	675.8	651.3	642.8	643.9	606.7	568.5	534.5	453.7	390.0	361.3	351.7
82.5°	444.1	424.0	415.5	417.6	396.3	373.0	351.7	295.4	252.9	235.9	230.6
85°	235.9	221.0	213.6	218.9	214.6	201.9	191.3	153.0	126.4	120.1	116.9
87.5°	74.4	64.8	59.5	78.6	66.9	59.5	57.4	45.7	35.1	35.1	34.0
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°	4555.1	4555.1	4555.1	4555.1	4555.1	4555.1	4555.1	4555.1	4555.1	4555.1	4555.1
2.5°	4548.7	4548.7	4507.3	4497.7	4493.5	4498.8	4457.4	4449.9	4509.4	4489.2	4443.5
5°	4512.6	4510.5	4452.0	4441.4	4441.4	4435.0	4388.3	4377.7	4437.2	4420.2	4370.2
7.5°	4468.0	4461.6	4392.5	4385.1	4374.5	4370.2	4318.2	4310.7	4361.7	4351.1	4304.3
10°	4413.8	4407.4	4325.6	4320.3	4308.6	4300.1	4251.2	4245.9	4298.0	4281.0	4243.8
12.5°	4342.6	4330.9	4247.0	4241.7	4232.1	4228.9	4181.1	4179.0	4236.3	4219.3	4180.0
15°	4249.1	4239.5	4146.0	4148.2	4149.2	4149.2	4111.0	4108.8	4165.2	4157.7	4115.2
17.5°	4146.0	4133.3	4044.0	4050.4	4057.8	4066.3	4036.6	4041.9	4101.4	4091.8	4053.6
20°	4029.2	4016.4	3929.3	3947.3	3963.3	3980.3	3961.1	3976.0	4031.3	4027.0	3998.3
22.5°	3898.5	3885.7	3805.0	3832.6	3859.1	3891.0	3882.5	3899.5	3958.0	3956.9	3931.4
25°	3739.1	3742.3	3671.1	3705.1	3749.7	3794.3	3797.5	3825.1	3890.0	3883.6	3860.2
27.5°	3590.3	3594.6	3519.1	3576.5	3636.0	3693.4	3707.2	3745.5	3811.3	3806.0	3785.8
30°	3434.1	3439.4	3366.1	3444.8	3517.0	3587.1	3616.9	3668.9	3735.9	3735.9	3714.6
32.5°	3271.6	3281.1	3204.6	3309.8	3393.8	3475.6	3527.6	3581.8	3658.3	3656.2	3638.1
35°	3104.7	3115.4	3045.2	3179.1	3263.1	3362.9	3427.8	3500.0	3568.0	3569.1	3555.3
37.5°	2934.7	2947.5	2883.7	3030.4	3126.0	3243.9	3326.8	3399.1	3474.5	3478.8	3466.0
40°	2765.8	2779.6	2724.4	2865.7	2986.8	3118.6	3214.2	3299.2	3382.1	3384.2	3375.7
42.5°	2596.8	2611.7	2570.3	2708.4	2845.5	2986.8	3099.4	3196.1	3281.1	3286.4	3276.9
45°	2432.2	2444.9	2415.2	2566.0	2697.8	2851.9	2981.5	3090.9	3177.0	3184.4	3181.2
47.5°	2268.5	2280.2	2253.6	2391.8	2543.7	2707.4	2857.2	2978.3	3069.7	3078.2	3076.1
50°	2108.1	2117.6	2089.0	2233.5	2384.3	2558.6	2714.8	2855.0	2957.0	2965.5	2964.5
52.5°	1948.7	1958.3	1933.8	2085.8	2222.8	2406.7	2576.7	2728.6	2829.5	2842.3	2844.4
55°	1794.6	1798.9	1779.8	1925.3	2058.1	2250.5	2446.0	2593.7	2694.6	2705.2	2711.6
57.5°	1640.6	1641.6	1625.7	1764.9	1892.4	2089.0	2294.0	2449.2	2544.8	2555.4	2565.0
60°	1487.6	1486.5	1468.4	1603.4	1725.6	1920.0	2133.6	2287.6	2380.1	2389.7	2402.4
62.5°	1335.6	1332.4	1316.5	1440.8	1555.6	1747.9	1962.5	2111.3	2199.5	2205.8	2222.8
65°	1184.7	1181.5	1166.7	1281.4	1385.6	1569.4	1779.8	1921.1	2000.8	2009.3	2006.1
67.5°	1036.0	1029.6	1017.9	1121.0	1215.5	1385.6	1587.4	1722.4	1788.3	1795.7	1815.9
70°	887.2	879.8	853.2	962.7	1045.5	1197.5	1385.6	1505.6	1560.9	1568.3	1565.1
72.5°	740.6	733.2	704.5	805.4	875.5	1008.4	1176.2	1276.1	1323.9	1330.3	1330.3
75°	598.2	594.0	575.9	652.4	710.8	819.2	961.6	1044.5	1081.7	1089.1	1087.0
77.5°	461.1	458.0	439.9	505.8	551.5	632.2	747.0	811.8	839.4	847.9	866.0
80°	330.4	329.4	300.7	365.5	385.7	453.7	537.6	587.6	602.5	614.1	626.9
82.5°	211.4	212.5	183.8	239.1	247.6	291.1	343.2	374.0	384.6	394.2	403.8
85°	103.1	107.3	91.4	126.4	127.5	149.8	172.1	183.8	188.1	195.5	204.0
87.5°	26.6	30.8	17.0	36.1	31.9	41.4	47.8	51.0	49.9	55.3	58.4
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°	4555.1	4555.1	4555.1	4555.1	4555.1	4555.1	4555.1	4555.1	4555.1	4555.1	4555.1
2.5°	4458.4	4492.4	4475.4	4530.7	4551.9	4517.9	4577.4	4578.5	4536.0	4585.9	4613.5
5°	4389.4	4424.4	4413.8	4471.2	4497.7	4468.0	4540.2	4554.0	4512.6	4568.9	4613.5
7.5°	4319.2	4360.7	4346.9	4405.3	4437.2	4413.8	4491.4	4513.7	4481.8	4543.4	4602.9
10°	4258.7	4293.7	4278.8	4340.5	4368.1	4349.0	4425.5	4466.9	4437.2	4512.6	4583.8
12.5°	4199.2	4227.8	4210.8	4261.8	4288.4	4264.0	4357.5	4395.7	4374.5	4453.1	4544.5
15°	4122.7	4154.5	4131.2	4176.8	4197.0	4175.8	4252.3	4318.2	4291.6	4377.7	4478.6
17.5°	4064.2	4082.3	4050.4	4086.5	4098.2	4069.5	4147.1	4211.9	4192.8	4286.3	4403.2
20°	3999.4	4014.3	3969.6	3989.8	3988.8	3952.6	4023.8	4087.6	4074.8	4177.9	4310.7
22.5°	3927.1	3934.6	3882.5	3886.8	3884.6	3825.1	3888.9	3953.7	3948.4	4052.5	4201.3
25°	3850.6	3851.7	3784.8	3782.6	3759.3	3689.1	3745.5	3818.8	3802.8	3915.5	4071.7
27.5°	3775.2	3764.6	3683.8	3664.7	3627.5	3543.6	3593.5	3659.4	3649.8	3760.3	3933.5
30°	3694.5	3680.6	3581.8	3546.8	3492.6	3395.9	3437.3	3498.9	3504.3	3600.9	3782.6
32.5°	3617.9	3582.9	3473.4	3422.4	3354.4	3241.8	3264.1	3326.8	3335.3	3433.1	3620.1
35°	3519.1	3495.8	3360.8	3273.7	3206.7	3083.5	3106.9	3150.4	3163.2	3258.8	3449.0
37.5°	3425.6	3388.4	3245.0	3138.7	3052.7	2923.0	2929.4	2974.0	2986.8	3083.5	3271.6
40°	3328.9	3275.8	3121.7	2997.4	2898.6	2762.6	2755.2	2801.9	2811.5	2906.0	3076.1
42.5°	3225.9	3162.1	2988.9	2852.9	2739.2	2601.1	2586.2	2626.6	2637.2	2729.7	2896.5
45°	3121.7	3045.2	2852.9	2704.2	2579.8	2438.5	2423.7	2454.5	2470.4	2557.5	2718.0
47.5°	3011.2	2922.0	2712.7	2546.9	2418.3	2277.0	2259.0	2289.8	2302.5	2388.6	2540.5
50°	2895.4	2787.0	2568.2	2385.4	2257.9	2118.7	2092.1	2128.3	2140.0	2220.7	2369.5
52.5°	2767.9	2647.8	2414.1	2222.8	2095.3	1962.5	1930.6	1965.7	1979.5	2058.1	2195.2
55°	2633.0	2503.3	2259.0	2073.0	1934.9	1805.3	1778.7	1792.5	1822.3	1896.6	2024.1
57.5°	2481.0	2352.5	2095.3	1906.2	1773.4	1649.1	1626.7	1639.5	1667.1	1739.4	1854.1
60°	2319.5	2183.5	1928.5	1739.4	1610.8	1492.9	1472.7	1484.4	1514.1	1580.0	1686.3
62.5°	2160.1	2007.1	1756.4	1568.3	1451.4	1342.0	1336.7	1332.4	1360.1	1423.8	1517.3
65°	1966.8	1820.1	1576.8	1398.3	1292.0	1193.2	1172.0	1181.5	1208.1	1266.5	1364.3
67.5°	1759.6	1626.7	1393.0	1228.3	1133.7	1045.5	1027.5	1031.7	1059.4	1110.4	1195.4
70°	1539.6	1422.7	1204.9	1057.2	977.5	894.7	883.0	884.0	910.6	955.2	1029.6
72.5°	1309.0	1203.9	1014.7	888.3	822.4	762.9	752.3	739.5	764.0	802.2	866.0
75°	1074.2	981.8	825.6	722.5	670.5	620.5	611.0	598.2	622.6	655.6	705.5
77.5°	837.3	762.9	641.8	562.1	521.7	484.5	476.0	462.2	486.6	511.1	550.4
80°	605.6	551.5	479.2	395.3	381.5	357.0	348.5	333.6	357.0	373.0	402.7
82.5°	391.0	354.9	313.4	255.0	252.9	234.8	230.6	213.6	234.8	244.4	266.7
85°	197.6	180.6	170.0	129.6	133.9	122.2	121.1	103.1	120.1	124.3	137.1
87.5°	56.3	59.5	53.1	31.9	40.4	38.3	38.3	27.6	38.3	38.3	43.6
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: P838081

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-3HI-30-120-EDD

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	4555.1	4555.1	4555.1	4555.1	4555.1	4555.1	4555.1	4555.1
2.5°	4559.4	4577.4	4581.7	4580.6	4592.3	4656.0	4634.8	4656.0
5°	4570.0	4610.4	4621.0	4635.9	4655.0	4727.2	4703.9	4729.4
7.5°	4576.4	4636.9	4660.3	4689.0	4719.8	4800.6	4781.4	4806.9
10°	4576.4	4655.0	4689.0	4736.8	4778.2	4871.7	4853.7	4883.4
12.5°	4557.2	4658.2	4706.0	4772.9	4826.1	4927.0	4919.6	4940.8
15°	4517.9	4642.2	4708.1	4794.2	4860.1	4972.7	4969.5	4995.0
17.5°	4464.8	4614.6	4694.3	4802.7	4885.6	5012.0	5019.4	5033.3
20°	4397.9	4562.5	4666.7	4799.5	4903.6	5042.8	5052.4	5071.5
22.5°	4309.7	4499.9	4625.2	4785.7	4905.7	5055.6	5072.6	5090.6
25°	4205.5	4424.4	4571.0	4759.1	4895.1	5054.5	5077.9	5093.8
27.5°	4086.5	4326.7	4502.0	4716.6	4865.4	5037.5	5066.2	5085.3
30°	3948.4	4222.5	4423.4	4661.4	4825.0	5005.6	5036.4	5055.6
32.5°	3806.0	4107.8	4329.8	4590.2	4766.6	4954.6	4981.2	4996.1
35°	3650.9	3968.6	4217.2	4498.8	4691.1	4872.8	4893.0	4908.9
37.5°	3481.9	3817.7	4088.7	4395.7	4584.9	4759.1	4777.2	4795.2
40°	3307.7	3659.4	3944.1	4269.3	4458.4	4619.9	4639.0	4651.8
42.5°	3132.4	3484.1	3790.1	4120.5	4308.6	4463.7	4475.4	4488.2
45°	2954.9	3302.4	3616.9	3955.8	4141.8	4287.3	4291.6	4302.2
47.5°	2774.3	3114.3	3426.7	3767.8	3951.6	4084.4	4088.7	4097.2
50°	2592.6	2926.2	3223.7	3564.8	3744.4	3884.6	3865.5	3874.0
52.5°	2414.1	2728.6	3032.5	3345.9	3523.4	3647.7	3653.0	3636.0
55°	2238.8	2535.2	2814.7	3116.4	3285.4	3382.1	3378.9	3385.3
57.5°	2061.3	2339.7	2595.8	2872.0	3036.7	3128.1	3147.2	3124.9
60°	1880.7	2142.1	2371.6	2621.3	2780.7	2857.2	2879.5	2858.2
62.5°	1701.1	1941.3	2149.5	2367.3	2515.0	2609.6	2607.5	2584.1
65°	1521.6	1739.4	1925.3	2110.2	2238.8	2333.3	2329.1	2307.8
67.5°	1355.8	1535.4	1702.2	1852.0	1963.6	2028.4	2050.7	2025.2
70°	1173.0	1328.2	1474.8	1594.9	1687.3	1745.8	1767.0	1744.7
72.5°	990.3	1122.0	1225.1	1340.9	1412.1	1461.0	1483.3	1462.1
75°	809.7	918.0	1002.0	1092.3	1142.2	1183.7	1209.2	1187.9
77.5°	634.3	718.3	785.2	851.1	908.5	918.0	940.3	926.5
80°	467.5	528.1	577.0	620.5	662.0	666.2	684.3	675.8
82.5°	311.3	351.7	364.5	410.1	436.7	432.5	450.5	444.1
85°	164.7	189.1	211.4	225.3	240.1	226.3	242.3	235.9
87.5°	55.3	58.4	51.0	72.3	79.7	68.0	77.6	74.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)