

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



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: P838089

Luminaire Tested: **ORLG-24-4-INS-ASY2R-LD4-6STD-30-120-EDD**

Issue Date: 5/21/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P838089  
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-LD4-6STD-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

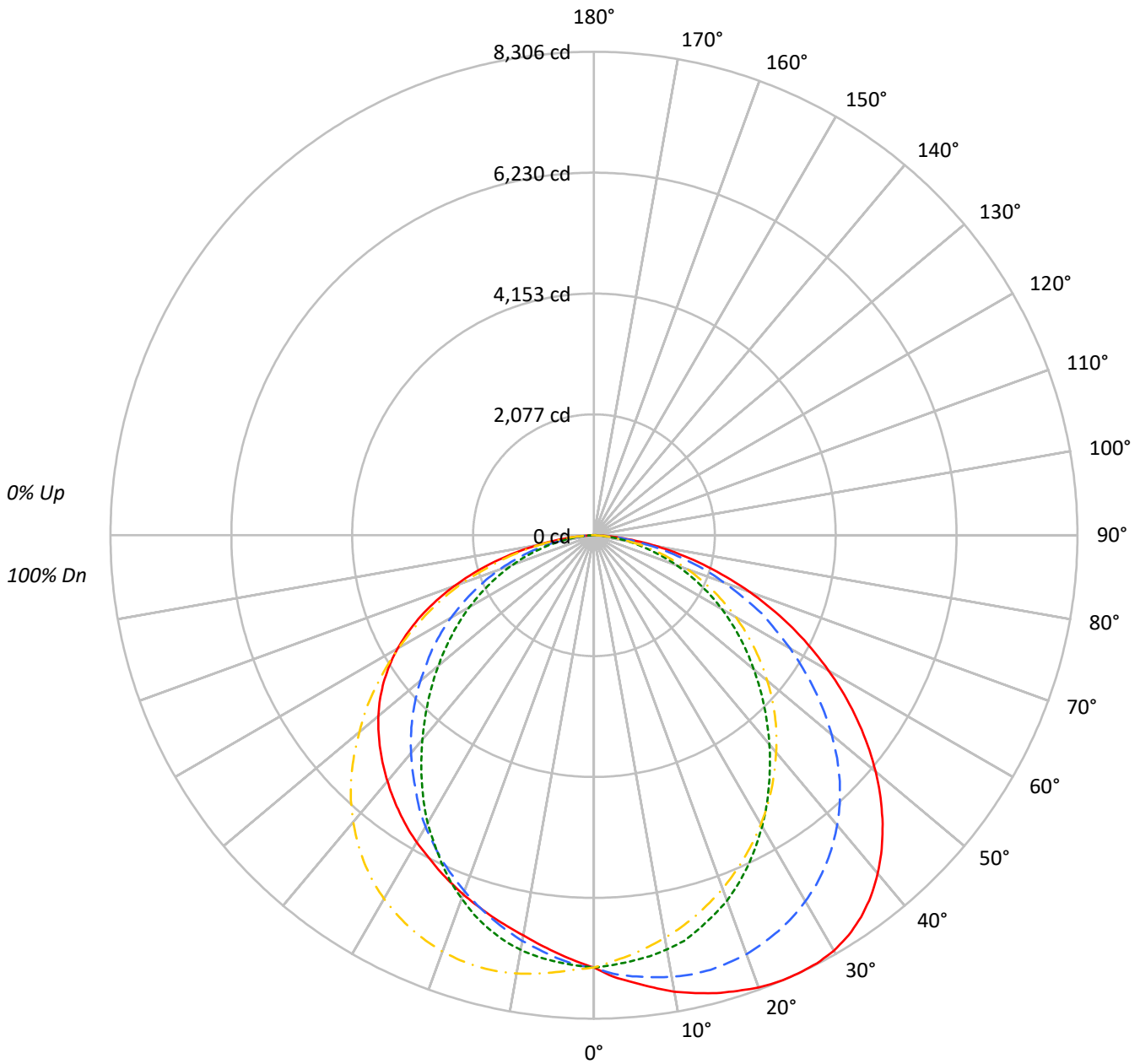
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 21791.5 lumens  
Efficiency: N/A  
Efficacy: 109.1 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): 199.8  
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

TEST NUMBER: P838089  
CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-6STD-30-120-EDD

### Luminous Intensity Polar Plot



— 0°-180°    - - 45°-225°    - · - 90°-270°    - · · - 135°-315°

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



TEST NUMBER: P838089

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-6STD-30-120-EDD

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20				20
RC	80				70				50				30				10				0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	86	86	86	84
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	72	72	72	70
3	90	79	71	65	88	78	70	64	75	68	63	72	66	62	69	65	61	61	61	61	59
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	52	52	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	45	45	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	40	40	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	35	35	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	31	31	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	28	28	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	26	26	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	9994	9994	9994	9994
5°	10416	9922	9735	9938
10°	10879	9871	9537	9885
15°	11345	9745	9444	9748
20°	11841	9568	9402	9514
25°	12331	9301	9401	9206
30°	12808	8977	9464	8878
35°	13148	8609	9559	8472
40°	13323	8238	9692	8052
45°	13349	7863	9880	7665
50°	13223	7504	10122	7304
55°	12949	7169	10348	6970
60°	12542	6821	10486	6644
65°	11981	6421	10431	6272
70°	11192	5950	10060	5841
75°	10070	5305	9232	5278
80°	8538	4444	7759	4510
85°	5937	2942	4922	3023



TEST NUMBER: P838089  
 CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-6STD-30-120-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	705.2	3.2
10°-20°	2042.1	9.4
20°-30°	3129.6	14.4
30°-40°	3805.4	17.5
40°-50°	3955.9	18.2
50°-60°	3573.4	16.4
60°-70°	2716.7	12.5
70°-80°	1514.5	7.0
80°-90°	348.7	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°	5876.9	27.0
0°-40°	9682.3	44.4
0°-60°	17211.6	79.0
0°-90°	21791.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	21791.5	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	7428	7428	7428	7428	7428	
5°	7712	7346	7208	7358	7712	744
15°	8145	6996	6780	6998	8145	2309
25°	8306	6265	6333	6201	8306	3836
35°	8004	5241	5820	5158	8004	4999
45°	7015	4132	5192	4028	7015	5401
55°	5520	3056	4411	2971	5520	4928
65°	3763	2017	3276	1970	3763	3719
75°	1937	1020	1776	1015	1937	2058
85°	385	191	319	196	385	484
90°	0	0	0	0	0	

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



TEST NUMBER: P838089

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-6STD-30-120-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	7427.6	7427.6	7427.6	7427.6	7427.6	7427.6	7427.6	7427.6	7427.6	7427.6	7427.6
2.5°	7592.2	7481.3	7483.0	7580.0	7505.5	7541.9	7438.0	7477.8	7465.7	7474.4	7389.5
5°	7711.7	7592.2	7590.4	7673.6	7590.4	7606.0	7474.4	7500.3	7462.2	7438.0	7346.1
7.5°	7838.2	7718.6	7706.5	7779.3	7670.1	7658.0	7512.5	7512.5	7443.2	7382.5	7295.9
10°	7962.9	7839.9	7824.3	7879.8	7744.6	7704.8	7528.1	7500.3	7408.5	7318.4	7224.9
12.5°	8056.5	7931.8	7919.6	7954.3	7801.8	7729.0	7528.1	7474.4	7339.2	7212.7	7140.0
15°	8144.9	8016.7	7983.7	8001.1	7826.1	7729.0	7503.8	7420.6	7247.4	7081.1	6996.2
17.5°	8207.2	8084.2	8051.3	8049.6	7838.2	7699.6	7451.8	7337.5	7129.6	6928.6	6843.7
20°	8269.6	8146.6	8105.0	8073.8	7834.7	7659.7	7375.6	7221.4	6978.8	6753.6	6682.6
22.5°	8300.8	8174.3	8129.3	8082.5	7812.2	7587.0	7282.0	7086.3	6809.0	6540.5	6481.6
25°	8306.0	8176.1	8127.5	8060.0	7767.2	7500.3	7160.8	6923.4	6613.3	6315.3	6265.0
27.5°	8292.1	8150.1	8101.6	8020.1	7699.6	7394.7	7017.0	6738.0	6405.4	6076.2	6022.5
30°	8243.6	8099.8	8053.0	7947.4	7604.3	7264.7	6859.3	6531.8	6174.9	5824.9	5778.2
32.5°	8146.6	8006.3	7968.1	7862.5	7500.3	7114.0	6675.6	6310.1	5920.2	5585.8	5516.5
35°	8004.5	7864.2	7839.9	7729.0	7354.8	6933.8	6474.7	6067.5	5649.9	5308.6	5241.1
37.5°	7819.1	7701.3	7664.9	7555.8	7183.3	6729.3	6244.2	5804.1	5374.5	5007.2	4965.6
40°	7585.2	7474.4	7446.6	7349.6	6984.0	6502.4	5994.7	5532.1	5090.3	4749.0	4690.1
42.5°	7318.4	7214.5	7198.9	7098.4	6738.0	6251.2	5724.4	5249.7	4794.1	4464.9	4406.0
45°	7015.2	6914.7	6911.3	6816.0	6469.5	5972.2	5440.3	4963.8	4504.7	4163.4	4132.2
47.5°	6680.8	6590.7	6590.7	6502.4	6169.7	5665.5	5147.5	4665.8	4213.6	3912.2	3856.7
50°	6317.0	6232.1	6206.1	6162.8	5838.8	5331.2	4839.1	4374.8	3926.0	3638.4	3584.7
52.5°	5928.9	5856.1	5873.5	5793.8	5480.2	4982.9	4527.2	4047.3	3636.7	3375.1	3321.4
55°	5520.0	5416.0	5431.6	5402.2	5105.9	4624.3	4177.3	3777.0	3352.5	3106.5	3056.3
57.5°	5095.5	4960.4	5015.8	4998.5	4707.4	4257.0	3856.7	3470.4	3070.1	2843.2	2794.7
60°	4660.6	4530.7	4587.9	4572.3	4298.5	3889.6	3525.8	3167.2	2789.5	2583.3	2534.8
62.5°	4213.6	4094.1	4146.1	4133.9	3882.7	3513.7	3196.6	2867.4	2507.0	2321.7	2276.6
65°	3763.2	3648.8	3695.6	3686.9	3454.8	3174.1	2858.8	2557.3	2222.9	2061.8	2016.7
67.5°	3302.3	3196.6	3239.9	3239.9	3026.8	2758.3	2519.2	2243.7	1944.0	1805.3	1763.8
70°	2844.9	2746.1	2784.3	2780.8	2600.6	2382.3	2176.1	1930.1	1661.5	1547.2	1512.5
72.5°	2384.0	2297.4	2332.1	2328.6	2177.9	2037.5	1833.1	1620.0	1386.1	1294.2	1263.1
75°	1937.0	1855.6	1888.5	1885.0	1762.0	1630.4	1493.5	1316.8	1115.8	1051.7	1020.5
77.5°	1510.8	1427.6	1455.4	1455.4	1365.3	1270.0	1160.8	1024.0	881.9	812.6	790.1
80°	1101.9	1062.1	1048.2	1049.9	989.3	926.9	871.5	739.8	635.9	589.1	573.5
82.5°	724.2	691.3	677.4	680.9	646.3	608.1	573.5	481.7	412.4	384.6	376.0
85°	384.6	360.4	348.2	356.9	350.0	329.2	311.9	249.5	206.2	195.8	190.6
87.5°	121.3	105.7	97.0	128.2	109.2	97.0	93.6	74.5	57.2	57.2	55.4
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: P838089

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-6STD-30-120-EDD

**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	7427.6	7427.6	7427.6	7427.6	7427.6	7427.6	7427.6	7427.6	7427.6	7427.6	7427.6
2.5°	7417.2	7417.2	7349.6	7334.0	7327.1	7335.7	7268.2	7256.1	7353.1	7320.2	7245.7
5°	7358.3	7354.8	7259.5	7242.2	7242.2	7231.8	7155.6	7138.2	7235.3	7207.5	7126.1
7.5°	7285.5	7275.1	7162.5	7150.4	7133.0	7126.1	7041.2	7029.1	7112.2	7094.9	7018.7
10°	7197.1	7186.7	7053.3	7044.7	7025.6	7011.8	6932.1	6923.4	7008.3	6980.6	6919.9
12.5°	7081.1	7062.0	6925.1	6916.5	6900.9	6895.7	6817.7	6814.2	6907.8	6880.1	6816.0
15°	6928.6	6913.0	6760.5	6764.0	6765.7	6765.7	6703.4	6699.9	6791.7	6779.6	6710.3
17.5°	6760.5	6739.7	6594.2	6604.6	6616.7	6630.6	6582.1	6590.7	6687.8	6672.2	6609.8
20°	6569.9	6549.2	6407.1	6436.5	6462.5	6490.2	6459.1	6483.3	6573.4	6566.5	6519.7
22.5°	6356.8	6336.1	6204.4	6249.4	6292.7	6344.7	6330.9	6358.6	6453.9	6452.1	6410.6
25°	6097.0	6102.2	5986.1	6041.5	6114.3	6187.0	6192.2	6237.3	6343.0	6332.6	6294.5
27.5°	5854.4	5861.3	5738.3	5831.9	5928.9	6022.5	6045.0	6107.3	6214.8	6206.1	6173.2
30°	5599.7	5608.4	5488.8	5617.0	5734.8	5849.2	5897.7	5982.6	6091.8	6091.8	6057.1
32.5°	5334.6	5350.2	5225.5	5397.0	5533.9	5667.3	5752.2	5840.5	5965.3	5961.8	5932.4
35°	5062.6	5079.9	4965.6	5183.9	5320.8	5483.6	5589.3	5707.1	5818.0	5819.7	5797.2
37.5°	4785.4	4806.2	4702.2	4941.3	5097.3	5289.6	5424.7	5542.5	5665.5	5672.5	5651.7
40°	4509.9	4532.4	4442.3	4672.8	4870.3	5085.1	5241.1	5379.7	5514.8	5518.3	5504.4
42.5°	4234.4	4258.7	4191.1	4416.3	4639.9	4870.3	5053.9	5211.6	5350.2	5358.9	5343.3
45°	3965.9	3986.7	3938.2	4184.2	4399.0	4650.2	4861.6	5040.1	5180.4	5192.5	5187.3
47.5°	3699.1	3718.1	3674.8	3900.0	4147.8	4414.6	4658.9	4856.4	5005.4	5019.3	5015.8
50°	3437.4	3453.0	3406.3	3641.9	3887.9	4172.1	4426.7	4655.4	4821.8	4835.6	4833.9
52.5°	3177.6	3193.1	3153.3	3401.1	3624.6	3924.3	4201.5	4449.3	4613.9	4634.7	4638.1
55°	2926.3	2933.3	2902.1	3139.4	3356.0	3669.6	3988.4	4229.2	4393.8	4411.2	4421.5
57.5°	2675.1	2676.8	2650.8	2877.8	3085.7	3406.3	3740.6	3993.6	4149.5	4166.9	4182.5
60°	2425.6	2423.9	2394.4	2614.5	2813.7	3130.8	3479.0	3730.2	3881.0	3896.6	3917.4
62.5°	2177.9	2172.7	2146.7	2349.4	2536.5	2850.1	3200.1	3442.6	3586.4	3596.8	3624.6
65°	1931.8	1926.6	1902.4	2089.5	2259.3	2559.0	2902.1	3132.5	3262.5	3276.3	3271.1
67.5°	1689.3	1678.9	1659.8	1827.9	1982.1	2259.3	2588.5	2808.5	2915.9	2928.1	2961.0
70°	1446.7	1434.6	1391.3	1569.7	1704.9	1952.6	2259.3	2455.1	2545.2	2557.3	2552.1
72.5°	1207.6	1195.5	1148.7	1313.3	1427.6	1644.2	1918.0	2080.8	2158.8	2169.2	2169.2
75°	975.4	968.5	939.1	1063.8	1159.1	1335.8	1568.0	1703.1	1763.8	1775.9	1772.4
77.5°	751.9	746.7	717.3	824.7	899.2	1030.9	1218.0	1323.7	1368.7	1382.6	1412.1
80°	538.8	537.1	490.3	596.0	628.9	739.8	876.7	958.1	982.4	1001.4	1022.2
82.5°	344.8	346.5	299.7	389.8	403.7	474.7	559.6	609.9	627.2	642.8	658.4
85°	168.1	175.0	149.0	206.2	207.9	244.3	280.7	299.7	306.7	318.8	332.7
87.5°	43.3	50.2	27.7	58.9	52.0	67.6	78.0	83.2	81.4	90.1	95.3
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: P838089

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-6STD-30-120-EDD

**CANDELA DISTRIBUTION (continued):**

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	7427.6	7427.6	7427.6	7427.6	7427.6	7427.6	7427.6	7427.6	7427.6	7427.6	7427.6
2.5°	7269.9	7325.4	7297.6	7387.7	7422.4	7366.9	7464.0	7465.7	7396.4	7477.8	7522.9
5°	7157.3	7214.5	7197.1	7290.7	7334.0	7285.5	7403.3	7425.8	7358.3	7450.1	7522.9
7.5°	7042.9	7110.5	7088.0	7183.3	7235.3	7197.1	7323.6	7360.0	7308.0	7408.5	7505.5
10°	6944.2	7001.4	6977.1	7077.6	7122.6	7091.5	7216.2	7283.8	7235.3	7358.3	7474.4
12.5°	6847.2	6893.9	6866.2	6949.4	6992.7	6952.8	7105.3	7167.7	7133.0	7261.2	7410.3
15°	6722.4	6774.4	6736.3	6810.8	6843.7	6809.0	6933.8	7041.2	6997.9	7138.2	7302.8
17.5°	6627.1	6656.6	6604.6	6663.5	6682.6	6635.8	6762.3	6868.0	6836.8	6989.2	7179.8
20°	6521.4	6545.7	6472.9	6505.8	6504.1	6445.2	6561.3	6665.2	6644.4	6812.5	7029.1
22.5°	6403.6	6415.7	6330.9	6337.8	6334.3	6237.3	6341.2	6446.9	6438.3	6608.1	6850.6
25°	6278.9	6280.6	6171.5	6168.0	6129.9	6015.5	6107.3	6226.9	6200.9	6384.6	6639.3
27.5°	6155.9	6138.5	6006.9	5975.7	5915.0	5778.2	5859.6	5967.0	5951.4	6131.6	6414.0
30°	6024.2	6001.7	5840.5	5783.4	5695.0	5537.3	5604.9	5705.4	5714.1	5871.7	6168.0
32.5°	5899.4	5842.3	5663.8	5580.6	5469.8	5286.1	5322.5	5424.7	5438.6	5598.0	5902.9
35°	5738.3	5700.2	5480.2	5338.1	5228.9	5028.0	5066.1	5137.1	5157.9	5313.8	5624.0
37.5°	5585.8	5525.2	5291.3	5118.0	4977.7	4766.3	4776.7	4849.5	4870.3	5028.0	5334.6
40°	5428.2	5341.5	5090.3	4887.6	4726.5	4504.7	4492.6	4568.8	4584.4	4738.6	5015.8
42.5°	5260.1	5156.2	4873.8	4652.0	4466.6	4241.4	4217.1	4282.9	4300.3	4451.0	4723.0
45°	5090.3	4965.6	4652.0	4409.4	4206.7	3976.3	3952.0	4002.3	4028.3	4170.3	4431.9
47.5°	4910.1	4764.6	4423.3	4153.0	3943.4	3712.9	3683.5	3733.7	3754.5	3894.8	4142.6
50°	4721.3	4544.6	4187.6	3889.6	3681.7	3454.8	3411.5	3470.4	3489.4	3621.1	3863.7
52.5°	4513.4	4317.6	3936.4	3624.6	3416.7	3200.1	3148.1	3205.3	3227.8	3356.0	3579.5
55°	4293.3	4082.0	3683.5	3380.3	3155.0	2943.7	2900.3	2922.9	2971.4	3092.7	3300.6
57.5°	4045.6	3835.9	3416.7	3108.3	2891.7	2689.0	2652.6	2673.4	2718.4	2836.2	3023.4
60°	3782.2	3560.5	3144.6	2836.2	2626.6	2434.3	2401.4	2420.4	2468.9	2576.3	2749.6
62.5°	3522.3	3272.8	2864.0	2557.3	2366.7	2188.3	2179.6	2172.7	2217.7	2321.7	2474.1
65°	3207.0	2967.9	2571.2	2280.1	2106.8	1945.7	1911.0	1926.6	1969.9	2065.2	2224.6
67.5°	2869.2	2652.6	2271.4	2002.9	1848.7	1704.9	1675.4	1682.3	1727.4	1810.5	1949.2
70°	2510.5	2319.9	1964.7	1723.9	1594.0	1458.8	1439.8	1441.5	1484.8	1557.6	1678.9
72.5°	2134.5	1963.0	1654.6	1448.4	1341.0	1244.0	1226.7	1205.9	1245.7	1308.1	1412.1
75°	1751.6	1600.9	1346.2	1178.2	1093.3	1011.8	996.2	975.4	1015.3	1069.0	1150.4
77.5°	1365.3	1244.0	1046.5	916.5	850.7	790.1	776.2	753.7	793.5	833.4	897.5
80°	987.6	899.2	781.4	644.5	622.0	582.1	568.3	544.0	582.1	608.1	656.6
82.5°	637.6	578.7	511.1	415.8	412.4	382.9	376.0	348.2	382.9	398.5	434.9
85°	322.3	294.5	277.2	211.4	218.3	199.2	197.5	168.1	195.8	202.7	223.5
87.5°	91.8	97.0	86.6	52.0	65.8	62.4	62.4	45.0	62.4	62.4	71.0
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: P838089

CATALOG NUMBER: ORLG-24-4-INS-ASY2R-LD4-6STD-30-120-EDD

**CANDELA DISTRIBUTION (continued):**

	295°	305°	315°	325°	335°	345°	355°	360°
0°	7427.6	7427.6	7427.6	7427.6	7427.6	7427.6	7427.6	7427.6
2.5°	7434.5	7464.0	7470.9	7469.2	7488.2	7592.2	7557.5	7592.2
5°	7451.8	7517.7	7535.0	7559.3	7590.4	7708.3	7670.1	7711.7
7.5°	7462.2	7561.0	7599.1	7645.9	7696.1	7827.8	7796.6	7838.2
10°	7462.2	7590.4	7645.9	7723.8	7791.4	7943.9	7914.4	7962.9
12.5°	7431.0	7595.6	7673.6	7782.8	7869.4	8034.0	8021.9	8056.5
15°	7366.9	7569.6	7677.1	7817.4	7924.8	8108.5	8103.3	8144.9
17.5°	7280.3	7524.6	7654.5	7831.3	7966.4	8172.6	8184.7	8207.2
20°	7171.2	7439.7	7609.5	7826.1	7995.9	8222.8	8238.4	8269.6
22.5°	7027.4	7337.5	7541.9	7803.5	7999.3	8243.6	8271.3	8300.8
25°	6857.6	7214.5	7453.6	7760.2	7982.0	8241.9	8280.0	8306.0
27.5°	6663.5	7055.1	7340.9	7690.9	7933.5	8214.2	8260.9	8292.1
30°	6438.3	6885.3	7212.7	7600.8	7867.7	8162.2	8212.4	8243.6
32.5°	6206.1	6698.2	7060.3	7484.8	7772.4	8079.0	8122.3	8146.6
35°	5953.1	6471.2	6876.6	7335.7	7649.3	7945.6	7978.5	8004.5
37.5°	5677.7	6225.2	6667.0	7167.7	7476.1	7760.2	7789.7	7819.1
40°	5393.5	5967.0	6431.3	6961.5	7269.9	7533.3	7564.5	7585.2
42.5°	5107.6	5681.1	6180.1	6719.0	7025.6	7278.6	7297.6	7318.4
45°	4818.3	5384.9	5897.7	6450.4	6753.6	6991.0	6997.9	7015.2
47.5°	4523.8	5078.2	5587.6	6143.7	6443.5	6660.0	6667.0	6680.8
50°	4227.5	4771.5	5256.7	5812.8	6105.6	6334.3	6303.1	6317.0
52.5°	3936.4	4449.3	4944.8	5455.9	5745.2	5948.0	5956.6	5928.9
55°	3650.5	4133.9	4589.6	5081.7	5357.1	5514.8	5509.6	5520.0
57.5°	3361.2	3815.1	4232.7	4683.2	4951.7	5100.7	5131.9	5095.5
60°	3066.7	3492.9	3867.1	4274.3	4534.2	4658.9	4695.3	4660.6
62.5°	2773.9	3165.4	3505.0	3860.2	4101.0	4255.2	4251.8	4213.6
65°	2481.1	2836.2	3139.4	3440.9	3650.5	3804.7	3797.8	3763.2
67.5°	2210.8	2503.6	2775.6	3019.9	3201.8	3307.5	3343.9	3302.3
70°	1912.8	2165.7	2404.8	2600.6	2751.3	2846.6	2881.3	2844.9
72.5°	1614.8	1829.6	1997.7	2186.5	2302.6	2382.3	2418.7	2384.0
75°	1320.2	1497.0	1633.8	1781.1	1862.5	1930.1	1971.7	1937.0
77.5°	1034.4	1171.2	1280.4	1387.8	1481.4	1497.0	1533.3	1510.8
80°	762.3	861.1	940.8	1011.8	1079.4	1086.3	1115.8	1101.9
82.5°	507.6	573.5	594.3	668.8	712.1	705.2	734.6	724.2
85°	268.6	308.4	344.8	367.3	391.6	369.0	395.0	384.6
87.5°	90.1	95.3	83.2	117.8	129.9	110.9	126.5	121.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)