

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: P837794

Luminaire Tested: **ORLG-12-4-INS-ASY2R-LD4-1LO-35-120-EDD-90**

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: P837794
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-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2 and
RFI grid
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

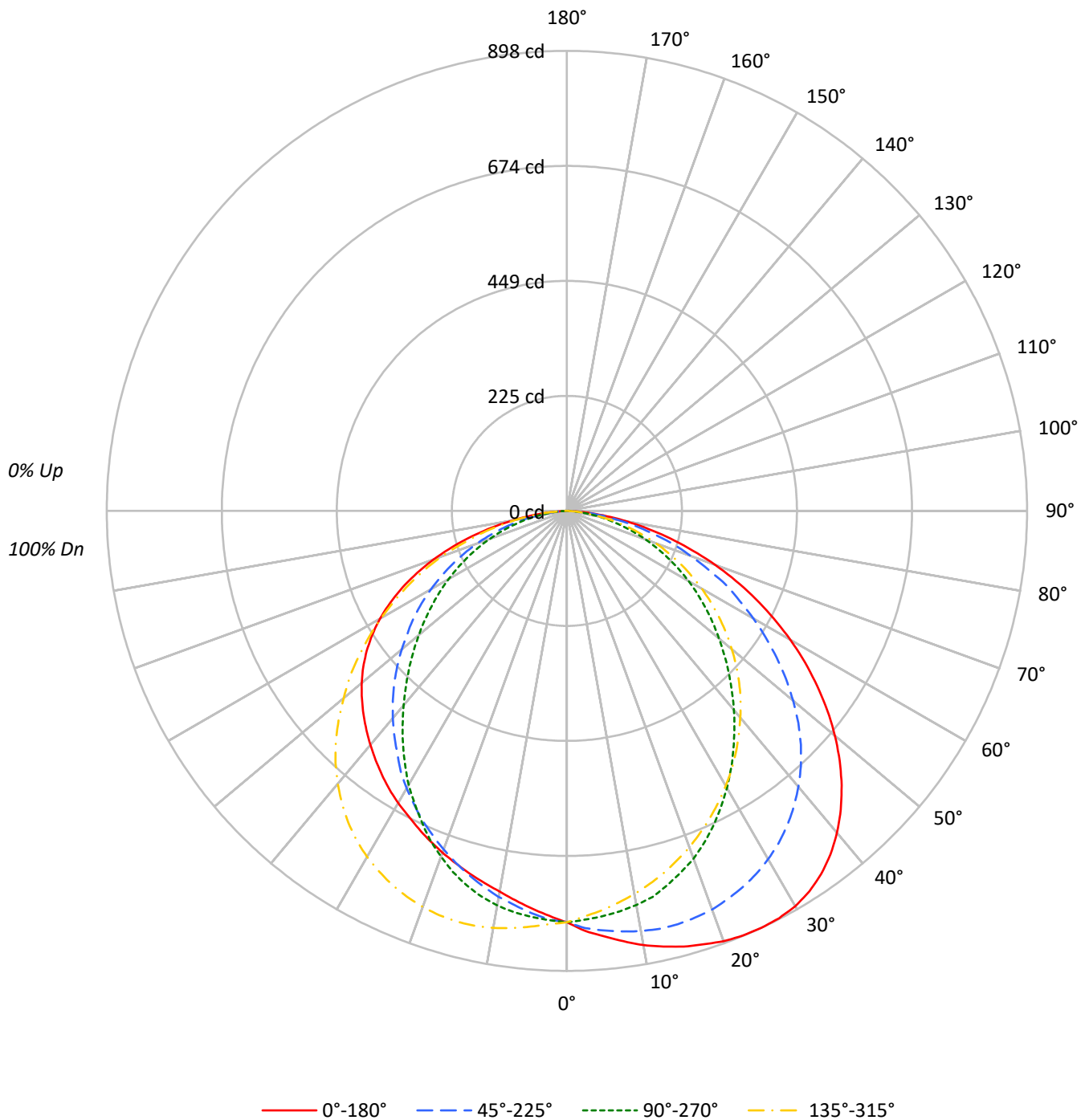
Lumens per Lamp: N/A
Luminaire Lumens: 2355.8 lumens
Efficiency: N/A
Efficacy: 100.7 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.16 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	2161	2161	2161	2161
5°	2252	2145	2105	2149
10°	2352	2134	2062	2137
15°	2453	2107	2042	2108
20°	2560	2069	2033	2057
25°	2666	2011	2033	1990
30°	2769	1941	2046	1919
35°	2843	1861	2067	1832
40°	2881	1781	2095	1741
45°	2886	1700	2136	1657
50°	2859	1622	2189	1579
55°	2799	1550	2237	1507
60°	2711	1475	2267	1436
65°	2590	1388	2255	1356
70°	2419	1286	2175	1263
75°	2177	1147	1996	1142
80°	1846	961	1678	975
85°	1284	636	1065	655

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.2	3.2
10°-20°	220.8	9.4
20°-30°	338.3	14.4
30°-40°	411.4	17.5
40°-50°	427.7	18.2
50°-60°	386.3	16.4
60°-70°	293.7	12.5
70°-80°	163.7	6.9
80°-90°	37.7	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°	635.3	27.0
0°-40°	1046.7	44.4
0°-60°	1860.6	79.0
0°-90°	2355.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2355.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	803	803	803	803	803	
5°	834	794	779	796	834	80
15°	880	756	733	756	880	250
25°	898	677	685	670	898	415
35°	865	567	629	558	865	540
45°	758	447	561	436	758	584
55°	597	330	477	321	597	533
65°	407	218	354	213	407	402
75°	209	110	192	110	209	222
85°	42	21	34	21	42	52
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°	803.0	803.0	803.0	803.0	803.0	803.0	803.0	803.0	803.0	803.0	803.0
2.5°	820.7	808.8	808.9	819.4	811.4	815.3	804.1	808.4	807.1	808.0	798.8
5°	833.7	820.7	820.6	829.6	820.6	822.2	808.0	810.8	806.7	804.1	794.2
7.5°	847.3	834.4	833.1	841.0	829.2	827.9	812.1	812.1	804.6	798.1	788.7
10°	860.8	847.5	845.8	851.8	837.2	832.9	813.8	810.8	800.9	791.2	781.0
12.5°	870.9	857.5	856.1	859.9	843.4	835.5	813.8	808.0	793.4	779.7	771.9
15°	880.5	866.6	863.1	864.9	846.0	835.5	811.2	802.2	783.5	765.5	756.3
17.5°	887.2	873.9	870.4	870.2	847.3	832.4	805.6	793.2	770.7	749.0	739.8
20°	894.0	880.7	876.2	872.8	847.0	828.1	797.3	780.7	754.4	730.1	722.4
22.5°	897.4	883.7	878.8	873.8	844.5	820.2	787.2	766.1	736.1	707.1	700.7
25°	897.9	883.9	878.6	871.3	839.7	810.8	774.1	748.4	714.9	682.7	677.3
27.5°	896.4	881.1	875.8	867.0	832.4	799.4	758.6	728.4	692.4	656.9	651.1
30°	891.2	875.6	870.6	859.1	822.1	785.3	741.5	706.1	667.5	629.7	624.6
32.5°	880.7	865.5	861.4	850.0	810.8	769.1	721.7	682.1	640.0	603.9	596.4
35°	865.3	850.2	847.5	835.5	795.1	749.6	699.9	655.9	610.8	573.9	566.6
37.5°	845.3	832.5	828.6	816.8	776.5	727.5	675.0	627.5	581.0	541.3	536.8
40°	820.0	808.0	805.0	794.5	755.0	702.9	648.1	598.0	550.3	513.4	507.0
42.5°	791.2	779.9	778.2	767.4	728.4	675.8	618.8	567.5	518.3	482.7	476.3
45°	758.4	747.5	747.1	736.8	699.4	645.6	588.1	536.6	487.0	450.1	446.7
47.5°	722.2	712.5	712.5	702.9	667.0	612.5	556.5	504.4	455.5	422.9	416.9
50°	682.9	673.7	670.9	666.2	631.2	576.3	523.1	472.9	424.4	393.3	387.5
52.5°	640.9	633.1	634.9	626.3	592.4	538.7	489.4	437.5	393.1	364.9	359.1
55°	596.7	585.5	587.2	584.0	552.0	499.9	451.6	408.3	362.4	335.8	330.4
57.5°	550.8	536.2	542.2	540.4	508.9	460.2	416.9	375.2	331.9	307.4	302.1
60°	503.8	489.8	496.0	494.3	464.7	420.5	381.2	342.4	301.6	279.3	274.0
62.5°	455.5	442.6	448.2	446.9	419.7	379.8	345.6	310.0	271.0	251.0	246.1
65°	406.8	394.5	399.5	398.6	373.5	343.1	309.0	276.5	240.3	222.9	218.0
67.5°	357.0	345.6	350.3	350.3	327.2	298.2	272.3	242.6	210.2	195.2	190.7
70°	307.5	296.9	301.0	300.6	281.1	257.5	235.2	208.7	179.6	167.3	163.5
72.5°	257.7	248.4	252.1	251.7	235.4	220.3	198.2	175.1	149.8	139.9	136.5
75°	209.4	200.6	204.2	203.8	190.5	176.2	161.5	142.3	120.6	113.7	110.3
77.5°	163.3	154.3	157.3	157.3	147.6	137.3	125.5	110.7	95.3	87.8	85.4
80°	119.1	114.8	113.3	113.5	106.9	100.2	94.2	80.0	68.7	63.7	62.0
82.5°	78.3	74.7	73.2	73.6	69.9	65.7	62.0	52.1	44.6	41.6	40.6
85°	41.6	39.0	37.6	38.6	37.8	35.6	33.7	27.0	22.3	21.2	20.6
87.5°	13.1	11.4	10.5	13.9	11.8	10.5	10.1	8.1	6.2	6.2	6.0
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°	803.0	803.0	803.0	803.0	803.0	803.0	803.0	803.0	803.0	803.0	803.0
2.5°	801.8	801.8	794.5	792.8	792.1	793.0	785.7	784.4	794.9	791.3	783.3
5°	795.5	795.1	784.8	782.9	782.9	781.8	773.5	771.7	782.2	779.2	770.4
7.5°	787.6	786.5	774.3	773.0	771.1	770.4	761.2	759.9	768.9	767.0	758.8
10°	778.0	776.9	762.5	761.6	759.5	758.0	749.4	748.4	757.6	754.6	748.1
12.5°	765.5	763.4	748.6	747.7	746.0	745.5	737.0	736.6	746.8	743.8	736.8
15°	749.0	747.3	730.8	731.2	731.4	731.4	724.7	724.3	734.2	732.9	725.4
17.5°	730.8	728.6	712.9	714.0	715.3	716.8	711.6	712.5	723.0	721.3	714.5
20°	710.2	708.0	692.6	695.8	698.6	701.6	698.3	700.9	710.6	709.9	704.8
22.5°	687.2	685.0	670.7	675.6	680.3	685.9	684.4	687.4	697.7	697.5	693.0
25°	659.1	659.7	647.1	653.1	661.0	668.8	669.4	674.3	685.7	684.6	680.5
27.5°	632.9	633.6	620.3	630.5	640.9	651.1	653.5	660.2	671.8	670.9	667.3
30°	605.4	606.3	593.4	607.2	620.0	632.3	637.6	646.7	658.5	658.5	654.8
32.5°	576.7	578.4	564.9	583.4	598.2	612.7	621.8	631.4	644.9	644.5	641.3
35°	547.3	549.2	536.8	560.4	575.2	592.8	604.2	617.0	629.0	629.1	626.7
37.5°	517.3	519.6	508.3	534.2	551.0	571.8	586.4	599.2	612.5	613.2	611.0
40°	487.5	490.0	480.2	505.1	526.5	549.7	566.6	581.6	596.2	596.5	595.1
42.5°	457.8	460.4	453.1	477.4	501.6	526.5	546.4	563.4	578.4	579.3	577.6
45°	428.7	431.0	425.7	452.3	475.6	502.7	525.6	544.9	560.0	561.3	560.8
47.5°	399.9	401.9	397.3	421.6	448.4	477.2	503.6	525.0	541.1	542.6	542.2
50°	371.6	373.3	368.2	393.7	420.3	451.0	478.6	503.3	521.3	522.8	522.6
52.5°	343.5	345.2	340.9	367.7	391.8	424.2	454.2	481.0	498.8	501.0	501.4
55°	316.3	317.1	313.7	339.4	362.8	396.7	431.2	457.2	475.0	476.9	478.0
57.5°	289.2	289.4	286.6	311.1	333.6	368.2	404.4	431.7	448.6	450.5	452.1
60°	262.2	262.0	258.8	282.6	304.2	338.5	376.1	403.3	419.6	421.2	423.5
62.5°	235.4	234.9	232.1	254.0	274.2	308.1	345.9	372.2	387.7	388.8	391.8
65°	208.8	208.3	205.7	225.9	244.2	276.6	313.7	338.6	352.7	354.2	353.6
67.5°	182.6	181.5	179.4	197.6	214.3	244.2	279.8	303.6	315.2	316.5	320.1
70°	156.4	155.1	150.4	169.7	184.3	211.1	244.2	265.4	275.1	276.5	275.9
72.5°	130.5	129.2	124.2	142.0	154.3	177.7	207.3	224.9	233.4	234.5	234.5
75°	105.4	104.7	101.5	115.0	125.3	144.4	169.5	184.1	190.7	192.0	191.6
77.5°	81.3	80.7	77.5	89.2	97.2	111.4	131.7	143.1	148.0	149.5	152.6
80°	58.3	58.1	53.0	64.4	68.0	80.0	94.8	103.6	106.2	108.3	110.5
82.5°	37.3	37.5	32.4	42.1	43.6	51.3	60.5	65.9	67.8	69.5	71.2
85°	18.2	18.9	16.1	22.3	22.5	26.4	30.3	32.4	33.2	34.5	36.0
87.5°	4.7	5.4	3.0	6.4	5.6	7.3	8.4	9.0	8.8	9.7	10.3
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°	803.0	803.0	803.0	803.0	803.0	803.0	803.0	803.0	803.0	803.0	803.0
2.5°	785.9	791.9	788.9	798.6	802.4	796.4	806.9	807.1	799.6	808.4	813.3
5°	773.7	779.9	778.0	788.2	792.8	787.6	800.3	802.8	795.5	805.4	813.3
7.5°	761.4	768.7	766.2	776.5	782.2	778.0	791.7	795.6	790.0	800.9	811.4
10°	750.7	756.9	754.3	765.1	770.0	766.6	780.1	787.4	782.2	795.5	808.0
12.5°	740.2	745.3	742.3	751.3	755.9	751.6	768.1	774.9	771.1	785.0	801.1
15°	726.7	732.3	728.2	736.3	739.8	736.1	749.6	761.2	756.5	771.7	789.5
17.5°	716.4	719.6	714.0	720.4	722.4	717.4	731.0	742.5	739.1	755.6	776.2
20°	705.0	707.6	699.8	703.3	703.1	696.8	709.3	720.5	718.3	736.5	759.9
22.5°	692.3	693.6	684.4	685.1	684.8	674.3	685.5	696.9	696.0	714.4	740.6
25°	678.8	679.0	667.2	666.8	662.7	650.3	660.2	673.2	670.3	690.2	717.7
27.5°	665.5	663.6	649.4	646.0	639.4	624.6	633.4	645.1	643.4	662.9	693.4
30°	651.2	648.8	631.4	625.2	615.7	598.6	605.9	616.8	617.7	634.8	666.8
32.5°	637.8	631.6	612.3	603.3	591.3	571.5	575.4	586.4	587.9	605.2	638.1
35°	620.3	616.2	592.4	577.1	565.3	543.5	547.7	555.3	557.6	574.4	608.0
37.5°	603.9	597.3	572.0	553.3	538.1	515.3	516.4	524.3	526.5	543.5	576.7
40°	586.8	577.4	550.3	528.4	511.0	487.0	485.7	493.9	495.6	512.3	542.2
42.5°	568.6	557.4	526.9	502.9	482.9	458.5	455.9	463.0	464.9	481.2	510.6
45°	550.3	536.8	502.9	476.7	454.8	429.9	427.2	432.7	435.5	450.8	479.1
47.5°	530.8	515.1	478.2	449.0	426.3	401.4	398.2	403.6	405.9	421.0	447.8
50°	510.4	491.3	452.7	420.5	398.0	373.5	368.8	375.2	377.2	391.5	417.7
52.5°	487.9	466.8	425.5	391.8	369.4	345.9	340.3	346.5	348.9	362.8	387.0
55°	464.1	441.3	398.2	365.4	341.1	318.2	313.5	316.0	321.2	334.3	356.8
57.5°	437.3	414.7	369.4	336.0	312.6	290.7	286.8	289.0	293.9	306.6	326.8
60°	408.9	384.9	339.9	306.6	283.9	263.2	259.6	261.7	266.9	278.5	297.2
62.5°	380.8	353.8	309.6	276.5	255.9	236.6	235.6	234.9	239.7	251.0	267.5
65°	346.7	320.8	278.0	246.5	227.8	210.3	206.6	208.3	213.0	223.3	240.5
67.5°	310.2	286.8	245.5	216.5	199.8	184.3	181.1	181.9	186.7	195.7	210.7
70°	271.4	250.8	212.4	186.4	172.3	157.7	155.6	155.8	160.5	168.4	181.5
72.5°	230.8	212.2	178.9	156.6	145.0	134.5	132.6	130.4	134.7	141.4	152.6
75°	189.4	173.1	145.5	127.4	118.2	109.4	107.7	105.4	109.8	115.6	124.4
77.5°	147.6	134.5	113.1	99.1	92.0	85.4	83.9	81.5	85.8	90.1	97.0
80°	106.8	97.2	84.5	69.7	67.2	62.9	61.4	58.8	62.9	65.7	71.0
82.5°	68.9	62.6	55.3	45.0	44.6	41.4	40.6	37.6	41.4	43.1	47.0
85°	34.8	31.8	30.0	22.9	23.6	21.5	21.4	18.2	21.2	21.9	24.2
87.5°	9.9	10.5	9.4	5.6	7.1	6.7	6.7	4.9	6.7	6.7	7.7
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: P837794

CATALOG NUMBER: ORLG-12-4-INS-ASY2R-LD4-1LO-35-120-EDD-90

CANDELA DISTRIBUTION (continued):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	803.0	803.0	803.0	803.0	803.0	803.0	803.0	803.0
2.5°	803.7	806.9	807.6	807.4	809.5	820.7	817.0	820.7
5°	805.6	812.7	814.6	817.2	820.6	833.3	829.2	833.7
7.5°	806.7	817.4	821.5	826.6	832.0	846.2	842.8	847.3
10°	806.7	820.6	826.6	835.0	842.3	858.8	855.6	860.8
12.5°	803.3	821.1	829.6	841.3	850.7	868.5	867.2	870.9
15°	796.4	818.3	829.9	845.1	856.7	876.6	876.0	880.5
17.5°	787.0	813.4	827.5	846.6	861.2	883.5	884.8	887.2
20°	775.2	804.3	822.6	846.0	864.4	888.9	890.6	894.0
22.5°	759.7	793.2	815.3	843.6	864.8	891.2	894.2	897.4
25°	741.3	779.9	805.8	838.9	862.9	891.0	895.1	897.9
27.5°	720.4	762.7	793.6	831.4	857.6	888.0	893.0	896.4
30°	696.0	744.3	779.7	821.7	850.5	882.4	887.8	891.2
32.5°	670.9	724.1	763.2	809.1	840.2	873.4	878.1	880.7
35°	643.6	699.6	743.4	793.0	826.9	859.0	862.5	865.3
37.5°	613.8	673.0	720.7	774.9	808.2	838.9	842.1	845.3
40°	583.1	645.1	695.3	752.6	785.9	814.4	817.8	820.0
42.5°	552.2	614.2	668.1	726.3	759.5	786.8	788.9	791.2
45°	520.9	582.1	637.6	697.3	730.1	755.8	756.5	758.4
47.5°	489.0	549.0	604.0	664.2	696.6	720.0	720.7	722.2
50°	457.0	515.8	568.3	628.4	660.0	684.8	681.4	682.9
52.5°	425.5	481.0	534.6	589.8	621.1	643.0	643.9	640.9
55°	394.6	446.9	496.2	549.3	579.1	596.2	595.6	596.7
57.5°	363.4	412.4	457.6	506.3	535.3	551.4	554.8	550.8
60°	331.5	377.6	418.1	462.1	490.2	503.6	507.6	503.8
62.5°	299.9	342.2	378.9	417.3	443.3	460.0	459.6	455.5
65°	268.2	306.6	339.4	372.0	394.6	411.3	410.6	406.8
67.5°	239.0	270.6	300.1	326.5	346.1	357.6	361.5	357.0
70°	206.8	234.1	260.0	281.1	297.4	307.7	311.5	307.5
72.5°	174.6	197.8	216.0	236.4	248.9	257.5	261.5	257.7
75°	142.7	161.8	176.6	192.5	201.3	208.7	213.1	209.4
77.5°	111.8	126.6	138.4	150.0	160.1	161.8	165.8	163.3
80°	82.4	93.1	101.7	109.4	116.7	117.4	120.6	119.1
82.5°	54.9	62.0	64.2	72.3	77.0	76.2	79.4	78.3
85°	29.0	33.3	37.3	39.7	42.3	39.9	42.7	41.6
87.5°	9.7	10.3	9.0	12.7	14.0	12.0	13.7	13.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)