

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: P834236

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-1STD-20-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834236
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2-LD4-1STD-20-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

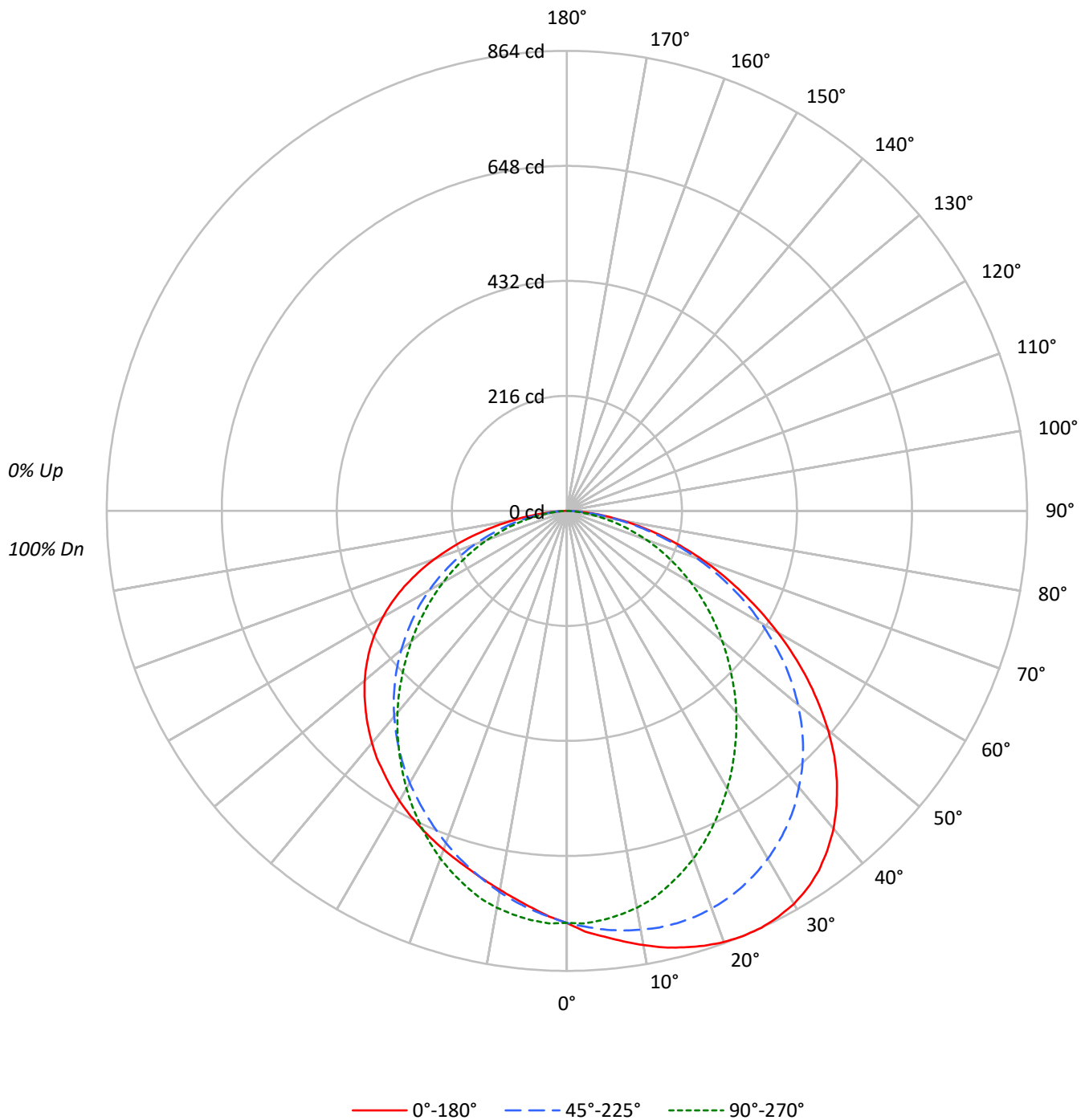
Lumens per Lamp: N/A
Luminaire Lumens: 2276.2 lumens
Efficiency: N/A
Efficacy: 68.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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: 28.75 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	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	88	90	88	86	84		
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70		
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58		
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50		
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	43		
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	37		
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33		
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	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°
0°	2082	2082	2082
5°	2168	2083	2022
10°	2263	2068	1975
15°	2364	2035	1947
20°	2468	1990	1938
25°	2565	1932	1942
30°	2648	1872	1954
35°	2709	1805	1970
40°	2736	1738	1999
45°	2729	1665	2032
50°	2680	1595	2074
55°	2588	1521	2117
60°	2462	1443	2149
65°	2312	1355	2146
70°	2152	1249	2083
75°	1954	1097	1920
80°	1677	902	1619
85°	1278	618	1112



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.4	3.2
10°-20°	211.9	9.3
20°-30°	324.7	14.3
30°-40°	396.2	17.4
40°-50°	414.4	18.2
50°-60°	375.1	16.5
60°-70°	284.0	12.5
70°-80°	158.3	7.0
80°-90°	38.2	1.7
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°	610.0	26.8
0°-40°	1006.3	44.2
0°-60°	1795.7	78.9
0°-90°	2276.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2276.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	774	774	774	774	774	
5°	803	789	771	752	748	77
15°	849	802	730	696	699	241
25°	864	779	651	628	654	398
35°	825	721	549	549	600	515
45°	717	627	437	457	534	552
55°	552	498	324	353	451	492
65°	363	342	213	242	337	360
75°	188	177	106	126	185	199
85°	41	36	20	27	36	50
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	773.8	773.8	773.8	773.8	773.8	773.8	773.8	773.8	773.8	773.8	773.8
2.5°	790.9	787.2	784.1	785.3	786.0	783.6	781.6	781.9	779.9	783.8	774.7
5°	802.6	799.2	795.6	797.0	795.6	792.1	789.2	788.4	782.9	785.1	775.8
7.5°	815.6	811.9	806.6	808.2	805.3	798.7	795.0	792.8	784.5	784.6	774.3
10°	828.1	824.9	817.8	818.8	813.6	804.8	798.8	795.8	784.1	782.4	771.8
12.5°	839.8	835.4	827.8	828.3	820.7	809.0	801.4	797.0	781.8	776.7	766.2
15°	848.7	844.5	835.4	835.2	825.4	810.2	801.6	795.5	776.2	768.2	757.2
17.5°	856.4	852.5	841.1	840.8	829.0	809.7	799.4	791.7	768.1	758.3	746.1
20°	861.8	857.9	845.2	844.0	829.8	807.1	794.8	785.1	757.4	745.7	732.2
22.5°	864.3	860.4	846.0	844.3	827.8	802.1	788.2	776.9	745.2	730.0	716.0
25°	863.8	860.1	843.8	842.1	823.9	794.5	778.9	765.9	729.8	711.9	698.0
27.5°	859.6	856.7	839.6	837.4	816.8	784.1	767.6	753.2	712.8	692.8	677.7
30°	852.3	850.1	832.0	830.0	808.0	772.8	754.4	737.8	694.3	671.8	656.6
32.5°	840.6	838.6	820.3	818.5	796.1	758.3	739.0	721.9	674.2	649.3	634.1
35°	824.6	823.4	805.6	803.6	780.9	741.7	721.2	702.4	653.2	625.1	610.6
37.5°	803.4	803.4	786.3	784.1	762.0	721.4	701.3	681.3	629.5	599.8	585.4
40°	778.9	781.1	763.7	761.5	740.0	699.6	677.6	656.6	604.0	573.0	559.0
42.5°	749.5	751.5	736.9	734.9	714.8	674.4	653.9	631.1	577.3	545.8	531.3
45°	717.0	719.7	706.7	705.1	686.4	646.8	627.2	604.0	549.4	517.4	503.2
47.5°	680.8	684.3	673.0	672.2	654.7	618.5	598.1	574.6	520.1	487.8	474.4
50°	640.2	645.3	636.0	636.0	620.4	584.4	566.6	543.1	489.7	457.4	444.2
52.5°	596.7	603.2	596.2	596.4	583.7	551.4	533.0	510.0	457.9	426.1	413.9
55°	551.7	558.0	553.6	554.3	544.3	514.9	498.1	475.3	425.4	394.4	382.9
57.5°	504.7	511.5	508.6	510.0	503.0	476.6	459.2	439.3	391.9	361.3	351.5
60°	457.5	464.0	462.4	464.3	459.9	437.1	421.2	400.5	358.2	328.8	320.2
62.5°	409.8	415.7	415.4	417.4	415.1	396.1	381.9	364.3	323.4	296.3	288.4
65°	363.1	368.2	367.9	370.1	369.6	354.3	341.5	325.4	288.6	263.7	256.8
67.5°	317.8	322.0	320.9	323.4	324.1	311.9	300.7	286.4	255.4	231.2	225.3
70°	273.5	276.4	274.9	276.5	278.1	268.9	259.5	246.8	220.1	198.7	193.8
72.5°	230.0	232.1	229.7	231.4	232.7	226.1	218.4	207.4	185.2	166.8	162.7
75°	187.9	190.8	185.9	187.6	188.6	182.0	177.4	168.5	149.4	135.1	132.4
77.5°	147.2	148.8	146.1	145.5	146.1	141.4	137.8	130.9	116.5	104.9	103.2
80°	108.2	109.3	106.6	105.9	106.4	103.0	100.3	95.2	85.1	76.3	75.6
82.5°	72.6	73.1	70.7	70.0	70.4	69.3	66.1	62.6	57.8	50.4	50.2
85°	41.4	41.4	39.7	39.1	39.4	37.7	36.5	34.7	32.8	27.7	28.1
87.5°	15.2	15.2	14.4	14.2	15.9	14.0	13.5	12.7	13.2	10.5	11.2
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	773.8	773.8	773.8	773.8	773.8	773.8	773.8	773.8	773.8	773.8	773.8
2.5°	777.2	775.5	774.0	768.7	770.9	765.5	765.2	763.2	761.6	758.8	762.5
5°	774.7	771.3	766.9	760.6	762.5	756.1	754.7	752.3	750.3	746.6	749.5
7.5°	770.6	765.0	758.1	750.1	752.7	744.7	742.7	740.2	738.5	734.1	736.6
10°	764.7	756.7	748.6	739.0	740.8	732.2	729.7	727.0	725.4	721.6	724.1
12.5°	755.5	745.9	734.9	724.4	726.5	718.3	715.0	712.1	711.6	708.4	711.4
15°	743.7	730.3	719.0	707.9	710.2	700.7	699.2	696.3	697.2	695.0	698.7
17.5°	728.7	713.3	700.9	688.9	691.3	683.3	682.1	680.8	681.6	681.3	685.4
20°	711.7	694.8	680.6	668.8	670.1	663.9	664.4	664.0	665.7	667.6	673.2
22.5°	692.6	673.5	658.6	646.5	648.5	643.1	645.4	646.1	649.0	653.2	660.3
25°	671.1	650.7	635.1	623.6	625.5	621.9	626.0	627.7	632.2	639.3	646.6
27.5°	648.7	627.0	610.4	599.4	603.0	599.4	605.5	608.9	615.8	623.6	632.6
30°	624.8	602.3	585.2	575.4	578.8	575.6	585.4	590.0	596.9	607.6	618.2
32.5°	599.8	576.1	559.3	551.7	554.1	553.6	564.6	569.7	579.0	591.1	602.5
35°	574.1	549.4	532.5	526.0	528.9	529.6	542.8	548.7	558.8	573.6	585.7
37.5°	547.5	522.3	505.7	500.5	503.0	505.6	521.0	526.9	538.4	554.4	567.8
40°	519.9	494.7	478.5	474.3	476.8	479.5	496.3	504.4	516.9	534.3	548.9
42.5°	492.0	466.8	451.1	448.1	450.6	455.8	473.6	481.2	494.4	513.7	529.7
45°	463.6	437.4	423.7	421.3	424.0	430.1	447.5	456.7	470.7	491.9	509.1
47.5°	434.9	409.3	396.3	394.8	397.5	404.2	423.5	431.8	446.7	469.2	487.8
50°	405.8	380.9	368.4	367.9	370.4	377.7	396.1	405.9	421.3	446.5	465.6
52.5°	376.3	352.5	341.2	341.2	343.5	351.0	369.6	379.7	395.6	422.2	443.3
55°	346.9	324.2	313.4	314.3	317.6	324.1	342.2	352.8	368.9	396.5	418.8
57.5°	317.5	296.0	286.2	287.4	290.6	297.0	314.8	326.8	341.3	369.9	392.7
60°	288.4	268.1	259.5	260.8	263.7	270.1	288.6	298.9	313.4	342.5	365.3
62.5°	259.0	240.5	232.4	234.1	236.6	243.1	260.5	270.5	284.8	313.4	336.4
65°	229.9	212.8	205.8	207.5	209.9	215.8	232.2	241.9	255.6	283.5	305.5
67.5°	201.1	185.5	179.8	181.5	183.3	188.9	202.5	212.9	225.8	252.4	273.2
70°	172.7	158.8	153.7	155.4	157.1	162.2	174.0	183.7	195.5	219.9	239.2
72.5°	144.6	131.1	128.5	130.1	131.4	135.8	147.2	154.8	165.1	186.7	203.3
75°	117.2	105.5	103.9	105.4	106.6	109.9	119.4	126.0	134.6	153.4	166.9
77.5°	90.8	81.0	80.3	81.5	82.7	85.1	92.5	99.5	106.2	120.1	132.1
80°	66.1	58.2	58.2	59.4	59.0	61.9	67.1	72.7	77.6	87.6	96.4
82.5°	43.6	37.4	38.2	39.1	39.6	40.8	44.0	48.2	51.2	57.3	63.1
85°	24.2	20.0	20.8	21.5	21.1	22.5	24.2	26.7	28.2	31.1	34.2
87.5°	9.0	7.4	7.6	8.1	8.5	9.1	9.1	10.7	10.8	11.2	11.8
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):

	160°	170°	180°
0°	773.8	773.8	773.8
2.5°	755.4	759.4	762.5
5°	742.4	745.7	748.4
7.5°	729.7	732.7	735.1
10°	717.7	721.0	722.7
12.5°	705.3	709.2	710.6
15°	693.1	697.0	698.7
17.5°	680.6	685.7	687.6
20°	668.9	675.4	676.9
22.5°	657.1	663.7	665.6
25°	644.3	652.0	653.9
27.5°	630.6	639.9	641.7
30°	616.9	627.0	628.9
32.5°	602.1	613.1	614.8
35°	586.7	597.7	599.8
37.5°	569.7	581.7	585.7
40°	551.9	564.9	569.2
42.5°	533.3	547.5	551.9
45°	513.3	528.9	534.0
47.5°	493.2	510.8	515.2
50°	471.4	490.2	495.4
52.5°	448.6	469.0	474.3
55°	424.9	445.5	451.3
57.5°	399.2	420.5	426.6
60°	372.3	393.6	399.3
62.5°	344.7	364.0	369.6
65°	313.9	332.0	337.1
67.5°	281.3	297.9	302.1
70°	246.6	261.0	264.7
72.5°	210.4	220.4	225.3
75°	173.0	181.0	184.7
77.5°	135.5	141.1	144.1
80°	98.8	102.0	104.5
82.5°	64.6	66.0	67.8
85°	34.8	34.8	36.0
87.5°	11.8	11.3	11.8
90°	0.0	0.0	0.0

(END OF REPORT)