

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: P835154

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-1STD-20-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835154
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-2-INS-ASY2-LD4-1STD-20-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

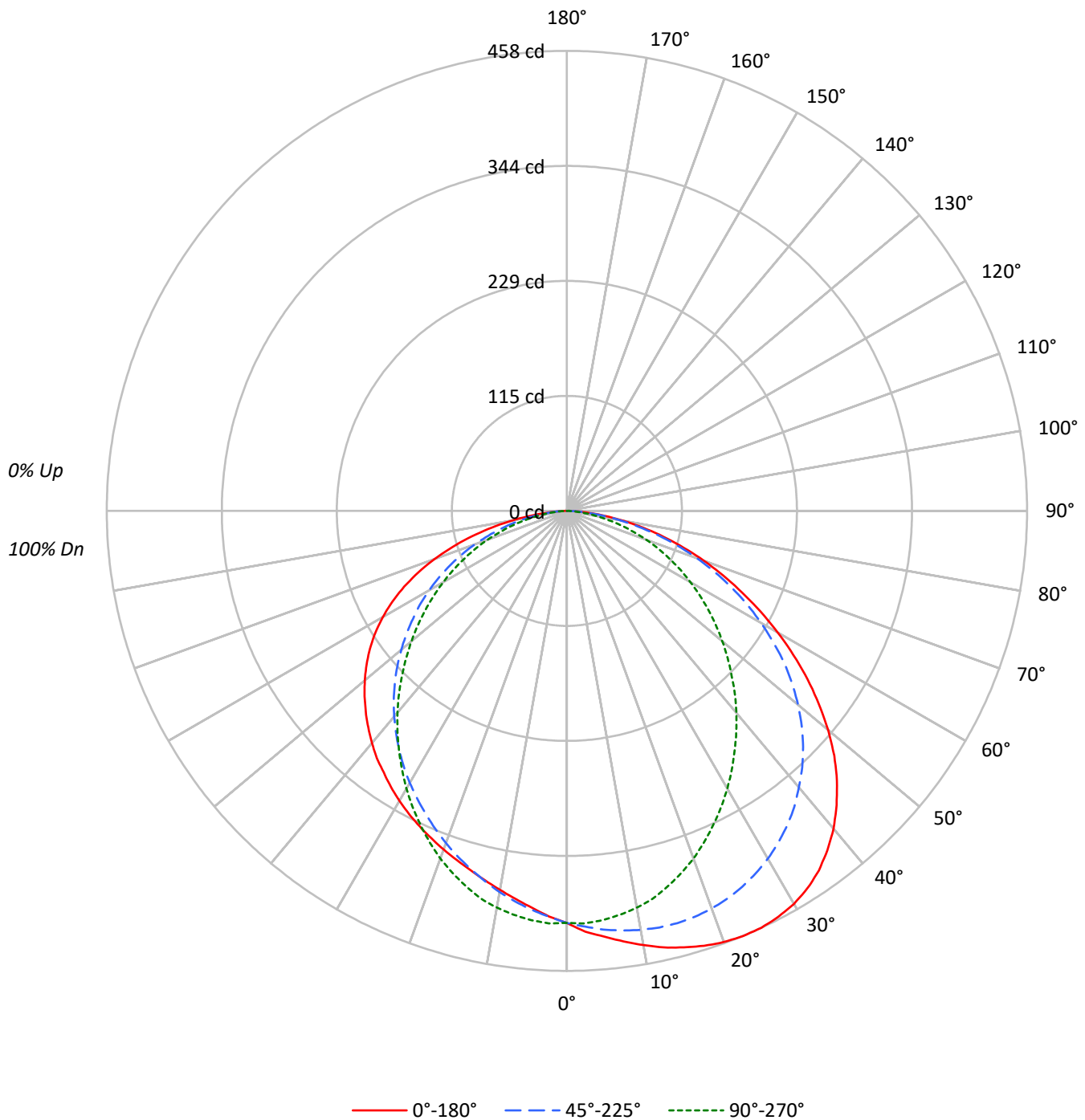
Lumens per Lamp: N/A
Luminaire Lumens: 1206.6 lumens
Efficiency: N/A
Efficacy: 72.7 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 16.6
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

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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	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	86	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	72	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	61	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	52	52	50
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	45	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	40	40	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	35	35	33
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	31	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	28	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	26	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	1104	1104	1104
5°	1149	1105	1072
10°	1200	1096	1047
15°	1253	1079	1032
20°	1308	1055	1027
25°	1360	1024	1029
30°	1404	992	1036
35°	1436	957	1044
40°	1450	921	1060
45°	1447	883	1077
50°	1421	845	1099
55°	1372	806	1122
60°	1305	765	1139
65°	1226	718	1138
70°	1141	662	1104
75°	1036	581	1018
80°	890	477	859
85°	679	327	590



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.9	3.2
10°-20°	112.3	9.3
20°-30°	172.1	14.3
30°-40°	210.0	17.4
40°-50°	219.7	18.2
50°-60°	198.8	16.5
60°-70°	150.6	12.5
70°-80°	83.9	7.0
80°-90°	20.2	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°	323.4	26.8
0°-40°	533.4	44.2
0°-60°	951.9	78.9
0°-90°	1206.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1206.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	410	410	410	410	410	
5°	425	418	409	399	397	41
15°	450	425	387	369	370	128
25°	458	413	345	333	347	211
35°	437	382	291	291	318	273
45°	380	332	232	242	283	292
55°	292	264	172	187	239	261
65°	192	181	113	128	179	191
75°	100	94	56	67	98	106
85°	22	19	11	14	19	26
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°	410.2	410.2	410.2	410.2	410.2	410.2	410.2	410.2	410.2	410.2	410.2
2.5°	419.3	417.3	415.7	416.3	416.7	415.4	414.3	414.5	413.4	415.5	410.6
5°	425.4	423.6	421.8	422.5	421.8	419.9	418.4	417.9	415.0	416.2	411.3
7.5°	432.3	430.4	427.6	428.4	426.9	423.4	421.4	420.2	415.8	415.9	410.5
10°	439.0	437.3	433.5	434.0	431.3	426.6	423.5	421.9	415.7	414.8	409.1
12.5°	445.2	442.8	438.8	439.1	435.0	428.8	424.8	422.5	414.4	411.7	406.2
15°	449.9	447.7	442.8	442.7	437.5	429.5	424.9	421.7	411.5	407.2	401.4
17.5°	454.0	451.9	445.9	445.7	439.4	429.2	423.7	419.7	407.1	401.9	395.5
20°	456.8	454.8	448.0	447.4	439.9	427.9	421.3	416.2	401.5	395.3	388.1
22.5°	458.2	456.1	448.5	447.6	438.8	425.2	417.8	411.8	395.0	387.0	379.5
25°	457.9	455.9	447.3	446.4	436.7	421.1	412.9	406.0	386.9	377.4	370.0
27.5°	455.7	454.1	445.1	443.9	433.0	415.7	406.9	399.3	377.8	367.2	359.3
30°	451.8	450.6	441.0	440.0	428.3	409.7	399.9	391.1	368.1	356.1	348.1
32.5°	445.6	444.5	434.9	433.9	422.0	401.9	391.7	382.7	357.4	344.2	336.1
35°	437.1	436.5	427.1	426.0	414.0	393.2	382.3	372.4	346.3	331.4	323.7
37.5°	425.9	425.9	416.8	415.7	403.9	382.4	371.7	361.2	333.7	317.9	310.3
40°	412.9	414.1	404.8	403.7	392.3	370.8	359.2	348.1	320.2	303.8	296.3
42.5°	397.3	398.4	390.7	389.6	378.9	357.5	346.6	334.5	306.0	289.3	281.6
45°	380.1	381.5	374.6	373.8	363.8	342.9	332.5	320.2	291.2	274.3	266.7
47.5°	360.9	362.8	356.8	356.3	347.1	327.9	317.0	304.6	275.7	258.6	251.5
50°	339.4	342.1	337.1	337.1	328.9	309.8	300.4	287.9	259.6	242.4	235.4
52.5°	316.3	319.7	316.1	316.1	309.4	292.3	282.5	270.3	242.7	225.9	219.4
55°	292.5	295.8	293.5	293.8	288.5	272.9	264.1	251.9	225.5	209.1	203.0
57.5°	267.5	271.1	269.6	270.3	266.7	252.7	243.4	232.8	207.7	191.5	186.3
60°	242.5	245.9	245.1	246.1	243.8	231.7	223.3	212.3	189.9	174.3	169.7
62.5°	217.2	220.4	220.2	221.3	220.0	210.0	202.5	193.1	171.4	157.1	152.9
65°	192.5	195.2	195.0	196.2	195.9	187.8	181.0	172.5	153.0	139.8	136.1
67.5°	168.5	170.7	170.1	171.4	171.8	165.3	159.4	151.8	135.4	122.6	119.4
70°	145.0	146.5	145.7	146.6	147.4	142.6	137.5	130.8	116.6	105.4	102.8
72.5°	121.9	123.0	121.8	122.7	123.4	119.9	115.8	109.9	98.2	88.4	86.3
75°	99.6	101.1	98.5	99.4	100.0	96.5	94.1	89.3	79.2	71.6	70.2
77.5°	78.0	78.9	77.5	77.1	77.5	75.0	73.1	69.4	61.8	55.6	54.7
80°	57.4	57.9	56.5	56.1	56.4	54.6	53.2	50.5	45.1	40.4	40.1
82.5°	38.5	38.7	37.5	37.1	37.3	36.8	35.1	33.2	30.7	26.7	26.6
85°	22.0	22.0	21.1	20.7	20.9	20.0	19.4	18.4	17.4	14.7	14.9
87.5°	8.1	8.1	7.6	7.5	8.4	7.4	7.2	6.7	7.0	5.6	5.9
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°	410.2	410.2	410.2	410.2	410.2	410.2	410.2	410.2	410.2	410.2	410.2
2.5°	412.0	411.1	410.3	407.5	408.7	405.8	405.6	404.5	403.7	402.2	404.2
5°	410.6	408.9	406.5	403.2	404.2	400.8	400.1	398.8	397.7	395.8	397.3
7.5°	408.5	405.5	401.9	397.6	399.0	394.8	393.7	392.4	391.5	389.1	390.5
10°	405.4	401.1	396.8	391.7	392.7	388.1	386.8	385.4	384.6	382.5	383.8
12.5°	400.5	395.4	389.6	384.0	385.1	380.8	379.0	377.5	377.2	375.5	377.1
15°	394.2	387.2	381.1	375.2	376.5	371.5	370.7	369.1	369.6	368.4	370.4
17.5°	386.3	378.1	371.6	365.2	366.4	362.2	361.6	360.9	361.3	361.2	363.3
20°	377.3	368.3	360.8	354.5	355.2	351.9	352.2	352.0	352.9	353.9	356.8
22.5°	367.2	357.0	349.1	342.7	343.8	340.9	342.1	342.5	344.0	346.3	350.0
25°	355.8	344.9	336.7	330.6	331.6	329.7	331.8	332.7	335.2	338.9	342.8
27.5°	343.8	332.4	323.6	317.8	319.6	317.8	321.0	322.8	326.5	330.6	335.3
30°	331.2	319.3	310.2	305.0	306.8	305.1	310.3	312.7	316.4	322.1	327.7
32.5°	317.9	305.4	296.5	292.5	293.7	293.5	299.3	302.0	306.9	313.4	319.4
35°	304.3	291.2	282.3	278.8	280.4	280.7	287.7	290.9	296.2	304.0	310.5
37.5°	290.2	276.9	268.1	265.3	266.7	268.0	276.2	279.3	285.4	293.9	301.0
40°	275.6	262.3	253.6	251.4	252.8	254.2	263.1	267.4	274.0	283.2	290.9
42.5°	260.8	247.5	239.1	237.5	238.9	241.6	251.0	255.1	262.1	272.3	280.8
45°	245.8	231.9	224.6	223.3	224.8	228.0	237.2	242.1	249.5	260.7	269.9
47.5°	230.5	217.0	210.1	209.3	210.7	214.3	224.5	228.9	236.8	248.7	258.6
50°	215.1	201.9	195.3	195.0	196.4	200.2	210.0	215.2	223.3	236.7	246.8
52.5°	199.5	186.9	180.8	180.8	182.1	186.0	195.9	201.3	209.7	223.8	235.0
55°	183.9	171.9	166.1	166.6	168.4	171.8	181.4	187.0	195.5	210.2	222.0
57.5°	168.3	156.9	151.7	152.3	154.0	157.4	166.9	173.2	180.9	196.1	208.2
60°	152.9	142.1	137.5	138.3	139.8	143.2	153.0	158.4	166.1	181.6	193.7
62.5°	137.3	127.5	123.2	124.1	125.4	128.8	138.1	143.4	151.0	166.1	178.3
65°	121.8	112.8	109.1	110.0	111.3	114.4	123.1	128.2	135.5	150.3	161.9
67.5°	106.6	98.4	95.3	96.2	97.2	100.2	107.3	112.9	119.7	133.8	144.8
70°	91.5	84.2	81.5	82.4	83.3	86.0	92.3	97.4	103.6	116.6	126.8
72.5°	76.7	69.5	68.1	68.9	69.7	72.0	78.0	82.0	87.5	99.0	107.8
75°	62.1	55.9	55.1	55.9	56.5	58.3	63.3	66.8	71.4	81.3	88.5
77.5°	48.1	42.9	42.6	43.2	43.8	45.1	49.0	52.7	56.3	63.7	70.0
80°	35.1	30.8	30.8	31.5	31.3	32.8	35.6	38.6	41.2	46.4	51.1
82.5°	23.1	19.8	20.3	20.7	21.0	21.6	23.3	25.6	27.2	30.4	33.4
85°	12.8	10.6	11.0	11.4	11.2	11.9	12.8	14.2	15.0	16.5	18.1
87.5°	4.8	3.9	4.0	4.3	4.5	4.8	4.8	5.6	5.7	5.9	6.3
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):

	160°	170°	180°
0°	410.2	410.2	410.2
2.5°	400.4	402.6	404.2
5°	393.5	395.3	396.7
7.5°	386.8	388.4	389.7
10°	380.4	382.2	383.1
12.5°	373.9	375.9	376.7
15°	367.4	369.5	370.4
17.5°	360.8	363.5	364.5
20°	354.6	358.0	358.8
22.5°	348.3	351.8	352.8
25°	341.5	345.6	346.6
27.5°	334.3	339.2	340.2
30°	327.0	332.4	333.4
32.5°	319.2	325.0	325.9
35°	311.0	316.9	317.9
37.5°	302.0	308.3	310.5
40°	292.6	299.5	301.7
42.5°	282.7	290.2	292.6
45°	272.1	280.4	283.1
47.5°	261.5	270.8	273.1
50°	249.9	259.8	262.6
52.5°	237.8	248.6	251.4
55°	225.2	236.2	239.2
57.5°	211.6	222.9	226.1
60°	197.3	208.6	211.7
62.5°	182.7	192.9	195.9
65°	166.4	176.0	178.7
67.5°	149.1	157.9	160.1
70°	130.7	138.3	140.3
72.5°	111.5	116.8	119.4
75°	91.7	95.9	97.9
77.5°	71.8	74.8	76.4
80°	52.4	54.1	55.4
82.5°	34.3	35.0	36.0
85°	18.5	18.5	19.1
87.5°	6.3	6.0	6.3
90°	0.0	0.0	0.0

(END OF REPORT)