

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: P835189

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-1LO-30-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835189
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-LD4-1LO-30-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

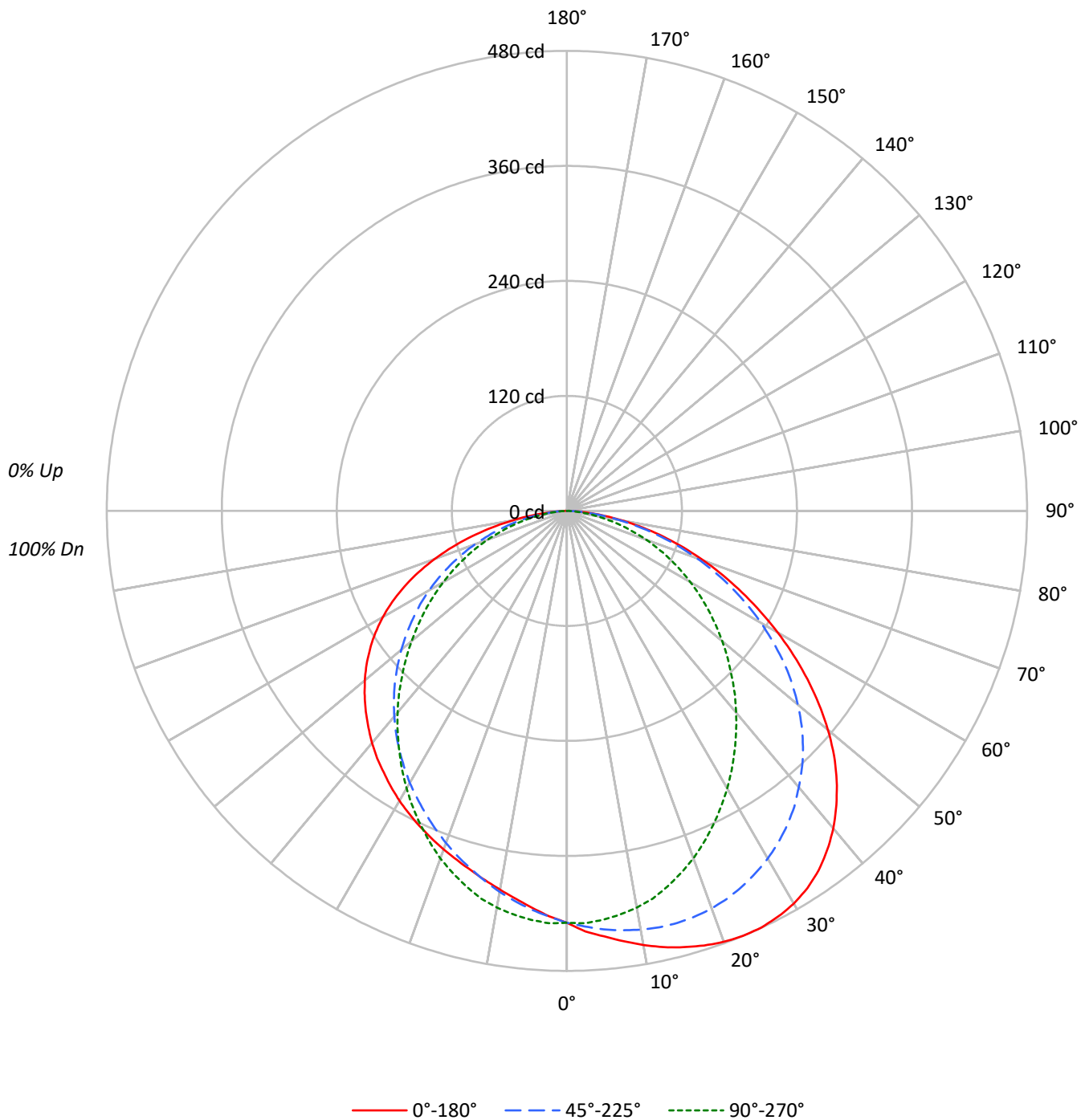
Lumens per Lamp: N/A
Luminaire Lumens: 1264.0 lumens
Efficiency: N/A
Efficacy: 108.0 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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

TEST NUMBER: P835189

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-1LO-30-120-EDD

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P835189

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-1LO-30-120-EDD

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°	1156	1156	1156
5°	1204	1157	1123
10°	1257	1148	1097
15°	1313	1130	1081
20°	1370	1105	1076
25°	1424	1073	1078
30°	1471	1039	1085
35°	1504	1002	1094
40°	1519	965	1110
45°	1515	924	1128
50°	1488	885	1152
55°	1437	845	1176
60°	1368	801	1194
65°	1284	753	1192
70°	1195	694	1157
75°	1085	609	1067
80°	931	501	899
85°	710	343	618



TEST NUMBER: P835189

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-1LO-30-120-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.8	3.2
10°-20°	117.7	9.3
20°-30°	180.3	14.3
30°-40°	220.0	17.4
40°-50°	230.1	18.2
50°-60°	208.3	16.5
60°-70°	157.7	12.5
70°-80°	87.9	7.0
80°-90°	21.2	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°	338.8	26.8
0°-40°	558.8	44.2
0°-60°	997.2	78.9
0°-90°	1264.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1264.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	430	430	430	430	430	
5°	446	438	428	418	416	43
15°	471	445	406	387	388	134
25°	480	432	361	349	363	221
35°	458	400	305	305	333	286
45°	398	348	243	254	296	306
55°	306	277	180	196	251	273
65°	202	190	118	134	187	200
75°	104	98	59	70	103	111
85°	23	20	11	15	20	28
90°	0	0	0	0	0	

TEST NUMBER: P835189

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-1LO-30-120-EDD

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	429.7	429.7	429.7	429.7	429.7	429.7	429.7	429.7	429.7	429.7	429.7
2.5°	439.2	437.1	435.4	436.1	436.5	435.2	434.0	434.2	433.1	435.2	430.2
5°	445.7	443.8	441.8	442.6	441.8	439.8	438.3	437.8	434.8	436.0	430.8
7.5°	452.9	450.8	447.9	448.8	447.2	443.5	441.4	440.2	435.6	435.7	430.0
10°	459.9	458.1	454.1	454.7	451.8	446.9	443.6	441.9	435.4	434.5	428.6
12.5°	466.3	463.9	459.7	459.9	455.7	449.2	445.0	442.6	434.1	431.3	425.5
15°	471.3	469.0	463.9	463.8	458.4	449.9	445.1	441.7	431.0	426.6	420.5
17.5°	475.5	473.4	467.1	466.9	460.3	449.6	443.9	439.7	426.5	421.1	414.3
20°	478.5	476.4	469.3	468.7	460.8	448.2	441.4	436.0	420.6	414.1	406.6
22.5°	480.0	477.8	469.8	468.9	459.7	445.4	437.7	431.4	413.8	405.4	397.6
25°	479.7	477.6	468.6	467.7	457.5	441.2	432.5	425.3	405.3	395.3	387.6
27.5°	477.3	475.7	466.2	465.0	453.6	435.4	426.2	418.2	395.8	384.7	376.4
30°	473.3	472.1	462.0	460.9	448.7	429.1	418.9	409.7	385.6	373.1	364.6
32.5°	466.8	465.7	455.5	454.5	442.1	421.1	410.4	400.9	374.4	360.6	352.1
35°	457.9	457.2	447.4	446.2	433.7	411.9	400.5	390.1	362.7	347.1	339.1
37.5°	446.1	446.1	436.7	435.4	423.1	400.6	389.4	378.3	349.6	333.1	325.1
40°	432.5	433.7	424.1	422.8	410.9	388.5	376.3	364.6	335.4	318.2	310.4
42.5°	416.2	417.3	409.2	408.1	396.9	374.5	363.1	350.4	320.6	303.1	295.0
45°	398.1	399.6	392.4	391.6	381.1	359.2	348.3	335.4	305.1	287.3	279.4
47.5°	378.0	380.0	373.7	373.3	363.6	343.5	332.1	319.1	288.8	270.9	263.5
50°	355.5	358.3	353.2	353.2	344.5	324.5	314.6	301.6	271.9	254.0	246.6
52.5°	331.4	334.9	331.1	331.2	324.1	306.2	296.0	283.2	254.3	236.6	229.8
55°	306.4	309.9	307.4	307.8	302.2	285.9	276.6	263.9	236.2	219.0	212.6
57.5°	280.3	284.0	282.4	283.2	279.3	264.7	255.0	243.9	217.6	200.6	195.2
60°	254.1	257.6	256.8	257.8	255.4	242.7	233.9	222.4	198.9	182.6	177.8
62.5°	227.6	230.9	230.7	231.8	230.5	220.0	212.1	202.3	179.6	164.6	160.1
65°	201.7	204.5	204.3	205.5	205.2	196.8	189.6	180.7	160.2	146.4	142.6
67.5°	176.5	178.8	178.2	179.6	180.0	173.2	167.0	159.0	141.8	128.4	125.1
70°	151.9	153.5	152.6	153.6	154.4	149.3	144.1	137.0	122.2	110.4	107.6
72.5°	127.7	128.9	127.5	128.5	129.2	125.6	121.3	115.2	102.8	92.6	90.4
75°	104.4	105.9	103.2	104.2	104.7	101.1	98.5	93.5	82.9	75.0	73.5
77.5°	81.7	82.7	81.2	80.8	81.2	78.5	76.5	72.7	64.7	58.2	57.3
80°	60.1	60.7	59.2	58.8	59.1	57.2	55.7	52.9	47.2	42.4	42.0
82.5°	40.3	40.6	39.3	38.9	39.1	38.5	36.7	34.8	32.1	28.0	27.9
85°	23.0	23.0	22.1	21.7	21.9	20.9	20.3	19.3	18.2	15.4	15.6
87.5°	8.5	8.5	8.0	7.9	8.8	7.8	7.5	7.0	7.3	5.8	6.2
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: P835189

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-1LO-30-120-EDD

CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	429.7	429.7	429.7	429.7	429.7	429.7	429.7	429.7	429.7	429.7	429.7
2.5°	431.6	430.6	429.8	426.9	428.1	425.1	424.9	423.8	422.9	421.3	423.4
5°	430.2	428.3	425.9	422.4	423.4	419.8	419.1	417.8	416.6	414.6	416.2
7.5°	427.9	424.8	421.0	416.6	418.0	413.6	412.4	411.0	410.1	407.6	409.0
10°	424.6	420.2	415.7	410.4	411.4	406.6	405.2	403.7	402.8	400.7	402.1
12.5°	419.6	414.2	408.1	402.3	403.4	398.9	397.0	395.4	395.1	393.4	395.0
15°	413.0	405.6	399.3	393.1	394.4	389.1	388.3	386.7	387.2	385.9	388.0
17.5°	404.6	396.1	389.2	382.6	383.9	379.5	378.8	378.0	378.5	378.3	380.6
20°	395.2	385.8	378.0	371.4	372.1	368.7	368.9	368.7	369.7	370.7	373.8
22.5°	384.6	374.0	365.7	359.0	360.1	357.1	358.4	358.8	360.4	362.7	366.7
25°	372.7	361.3	352.7	346.3	347.3	345.4	347.6	348.6	351.1	355.0	359.1
27.5°	360.2	348.2	339.0	332.9	334.8	332.9	336.3	338.1	342.0	346.3	351.3
30°	347.0	334.5	325.0	319.5	321.4	319.6	325.1	327.6	331.5	337.4	343.3
32.5°	333.1	319.9	310.6	306.4	307.7	307.4	313.5	316.3	321.5	328.3	334.6
35°	318.8	305.1	295.7	292.1	293.7	294.1	301.4	304.7	310.3	318.5	325.3
37.5°	304.0	290.0	280.8	277.9	279.3	280.7	289.3	292.6	299.0	307.9	315.3
40°	288.7	274.7	265.7	263.4	264.8	266.3	275.6	280.1	287.0	296.7	304.8
42.5°	273.2	259.2	250.5	248.8	250.2	253.1	263.0	267.2	274.5	285.2	294.2
45°	257.4	242.9	235.3	234.0	235.5	238.9	248.5	253.6	261.4	273.1	282.7
47.5°	241.5	227.3	220.1	219.2	220.7	224.5	235.2	239.8	248.1	260.5	270.9
50°	225.3	211.5	204.6	204.3	205.7	209.7	220.0	225.4	234.0	248.0	258.6
52.5°	209.0	195.7	189.4	189.4	190.8	194.9	205.2	210.9	219.7	234.4	246.2
55°	192.6	180.1	174.0	174.5	176.4	180.0	190.0	195.9	204.8	220.2	232.6
57.5°	176.3	164.4	158.9	159.6	161.4	164.9	174.8	181.5	189.5	205.4	218.1
60°	160.1	148.9	144.1	144.8	146.4	150.0	160.2	166.0	174.0	190.2	202.9
62.5°	143.8	133.6	129.1	130.0	131.4	135.0	144.6	150.2	158.2	174.0	186.8
65°	127.6	118.2	114.3	115.2	116.6	119.8	129.0	134.3	141.9	157.4	169.6
67.5°	111.7	103.0	99.8	100.8	101.8	104.9	112.4	118.3	125.4	140.1	151.7
70°	95.9	88.2	85.4	86.3	87.3	90.1	96.6	102.0	108.6	122.1	132.8
72.5°	80.3	72.8	71.4	72.2	73.0	75.4	81.7	85.9	91.7	103.7	112.9
75°	65.1	58.6	57.7	58.5	59.2	61.1	66.3	70.0	74.8	85.2	92.7
77.5°	50.4	45.0	44.6	45.3	45.9	47.2	51.4	55.2	59.0	66.7	73.4
80°	36.7	32.3	32.3	33.0	32.8	34.4	37.3	40.4	43.1	48.7	53.5
82.5°	24.2	20.8	21.2	21.7	22.0	22.6	24.4	26.8	28.5	31.8	35.0
85°	13.4	11.1	11.6	11.9	11.7	12.5	13.4	14.8	15.7	17.3	19.0
87.5°	5.0	4.1	4.2	4.5	4.7	5.1	5.1	5.9	6.0	6.2	6.6
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: P835189

CATALOG NUMBER: ORLG-24-2-INS-ASY2-LD4-1LO-30-120-EDD

CANDELA DISTRIBUTION (continued):

	160°	170°	180°
0°	429.7	429.7	429.7
2.5°	419.5	421.7	423.4
5°	412.2	414.1	415.6
7.5°	405.2	406.9	408.2
10°	398.5	400.4	401.3
12.5°	391.7	393.8	394.6
15°	384.9	387.1	388.0
17.5°	378.0	380.8	381.8
20°	371.5	375.0	375.9
22.5°	364.9	368.6	369.6
25°	357.8	362.1	363.1
27.5°	350.2	355.3	356.4
30°	342.5	348.2	349.2
32.5°	334.4	340.5	341.4
35°	325.8	331.9	333.1
37.5°	316.3	323.0	325.3
40°	306.5	313.7	316.1
42.5°	296.1	304.0	306.5
45°	285.1	293.7	296.5
47.5°	273.9	283.7	286.1
50°	261.8	272.2	275.1
52.5°	249.1	260.5	263.4
55°	235.9	247.4	250.6
57.5°	221.7	233.5	236.9
60°	206.7	218.6	221.8
62.5°	191.4	202.1	205.2
65°	174.3	184.4	187.2
67.5°	156.2	165.4	167.7
70°	136.9	144.9	147.0
72.5°	116.8	122.4	125.1
75°	96.1	100.5	102.6
77.5°	75.2	78.3	80.0
80°	54.9	56.6	58.0
82.5°	35.9	36.6	37.7
85°	19.3	19.3	20.0
87.5°	6.6	6.3	6.6
90°	0.0	0.0	0.0

(END OF REPORT)