

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: P486934

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-1LO-20-120-EDD-90**

Issue Date: 3/1/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P486934
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35357)
Test Lab: INNOVATION CENTER
Issue Date: 3/1/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-89BC-LD4-1LO-20-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

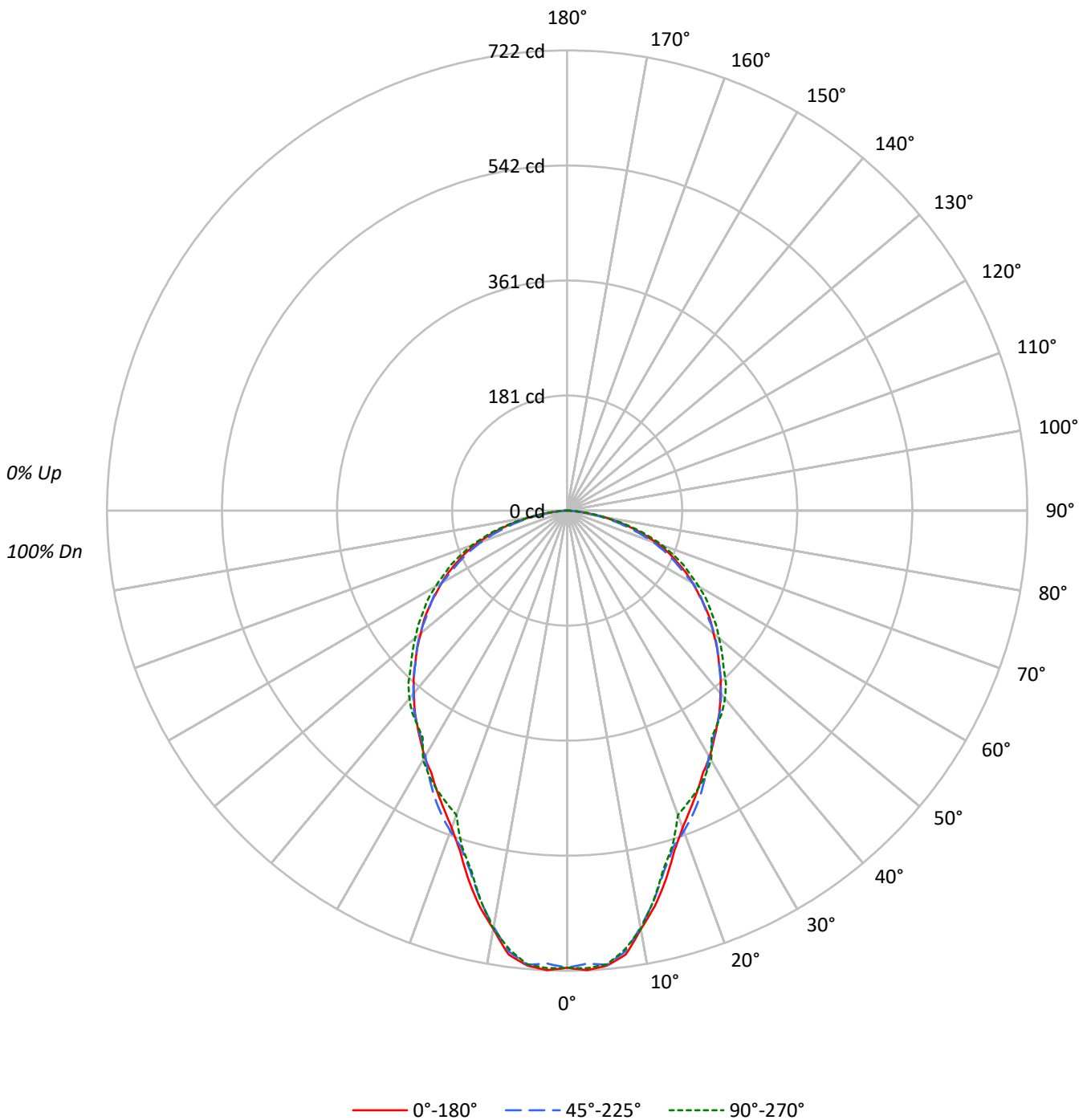
Lumens per Lamp: N/A
Luminaire Lumens: 1534.1 lumens
Efficiency: N/A
Efficacy: 65.6 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
Input Voltage (V): NR
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	0
RW	70	50	30	10	70	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	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	81	76	82	78	74	79	76	73	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51
5	77	64	55	48	75	63	54	48	61	53	48	59	52	47	57	51	47	45
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39
7	66	53	44	38	64	52	44	38	50	43	37	49	42	37	47	41	37	35
8	61	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31
9	58	44	36	31	56	44	36	31	43	35	30	41	35	30	40	35	30	28
10	54	41	33	28	53	40	33	28	40	33	28	39	32	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	965	965	965
5°	968	966	965
10°	911	907	910
15°	835	816	812
20°	758	766	728
25°	719	733	718
30°	694	691	702
35°	674	674	674
40°	657	660	676
45°	641	640	660
50°	627	632	651
55°	620	618	646
60°	612	611	642
65°	605	585	639
70°	593	559	622
75°	549	496	576
80°	445	404	456
85°	283	253	247



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.6	4.3
10°-20°	166.6	10.9
20°-30°	224.9	14.7
30°-40°	257.6	16.8
40°-50°	263.9	17.2
50°-60°	239.4	15.6
60°-70°	186.9	12.2
70°-80°	106.0	6.9
80°-90°	22.2	1.4
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°	458.1	29.9
0°-40°	715.7	46.7
0°-60°	1219.0	79.5
0°-90°	1534.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1534.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	717	717	717	717	717	
5°	717	708	716	717	715	67
15°	599	601	586	589	583	167
25°	484	490	494	482	483	223
35°	410	411	410	411	410	257
45°	337	340	336	350	347	260
55°	264	264	263	273	275	236
65°	190	186	184	192	201	188
75°	106	98	96	101	111	110
85°	18	16	16	15	16	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	717.3	717.3	717.3	717.3	717.3
2.5°	721.8	716.2	711.4	719.2	718.5
5°	716.6	708.4	715.5	717.0	714.7
7.5°	702.8	697.6	697.9	695.0	694.6
10°	666.6	669.6	663.6	668.8	666.2
12.5°	635.6	637.5	627.1	629.3	626.3
15°	599.1	600.9	586.0	589.0	582.7
17.5°	559.2	565.9	553.6	557.3	550.6
20°	529.3	534.9	535.3	529.3	508.1
22.5°	505.8	511.4	515.9	498.0	495.8
25°	484.2	490.5	493.9	482.0	483.4
27.5°	462.6	469.6	469.6	472.3	468.9
30°	446.9	449.9	445.0	454.7	451.7
32.5°	428.2	429.4	425.3	432.3	421.9
35°	410.3	411.1	410.3	410.7	410.3
37.5°	393.2	391.3	394.7	392.4	399.5
40°	374.1	374.1	375.6	379.4	385.0
42.5°	356.6	358.1	356.2	366.7	368.9
45°	336.8	339.5	336.5	350.3	346.9
47.5°	318.9	320.1	319.3	328.6	329.4
50°	299.5	301.0	301.8	310.0	311.1
52.5°	283.5	283.1	280.5	292.5	294.3
55°	264.5	264.1	263.4	272.7	275.3
57.5°	245.1	245.5	247.3	252.5	258.9
60°	227.5	225.7	227.2	233.5	238.7
62.5°	209.6	206.3	202.9	213.4	218.2
65°	189.9	185.8	183.9	192.5	200.7
67.5°	171.6	164.9	163.8	169.7	179.4
70°	150.7	142.5	142.1	146.6	158.2
72.5°	127.6	120.5	118.6	124.6	135.0
75°	105.6	97.7	95.5	101.1	110.8
77.5°	81.7	75.4	73.9	76.8	84.7
80°	57.4	53.7	52.2	53.3	58.9
82.5°	36.2	33.6	32.8	32.5	35.4
85°	18.3	16.4	16.4	15.3	16.0
87.5°	5.6	5.2	4.8	3.7	4.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)