

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: P487069

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-5HI-27-120-EDD**

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: P487069
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-LD4-5HI-27-120-EDD
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

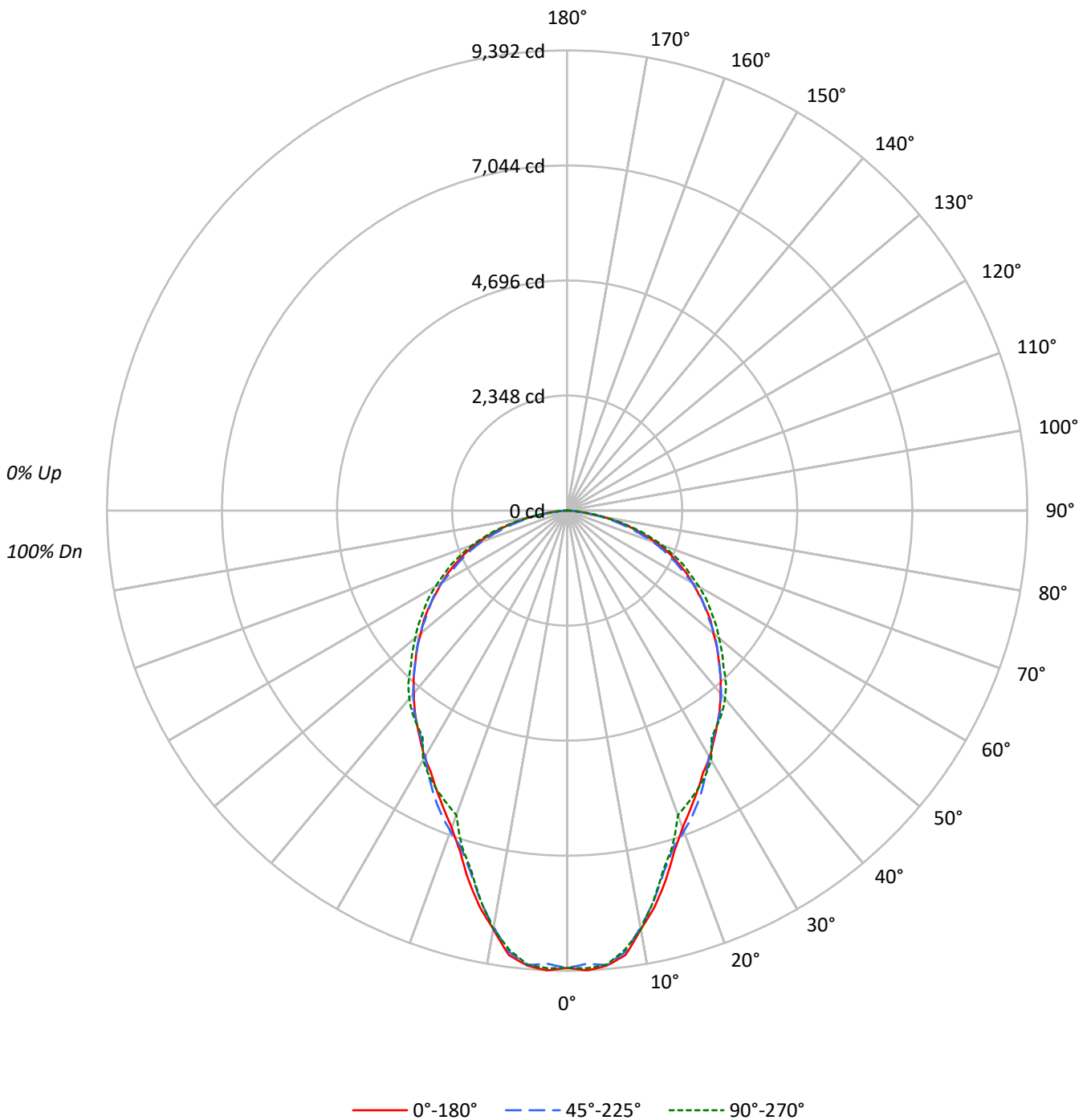
Lumens per Lamp: N/A
Luminaire Lumens: 19962.5 lumens
Efficiency: N/A
Efficacy: 90.7 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 220
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°	12559	12559	12559
5°	12594	12574	12561
10°	11851	11798	11844
15°	10859	10622	10561
20°	9862	9973	9466
25°	9354	9541	9339
30°	9035	8997	9133
35°	8770	8770	8770
40°	8551	8585	8799
45°	8340	8331	8590
50°	8159	8220	8474
55°	8073	8039	8403
60°	7968	7955	8360
65°	7866	7619	8314
70°	7714	7275	8096
75°	7141	6460	7494
80°	5792	5266	5942
85°	3671	3298	3222



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	867.0	4.3
10°-20°	2167.4	10.9
20°-30°	2927.1	14.7
30°-40°	3352.0	16.8
40°-50°	3433.5	17.2
50°-60°	3115.4	15.6
60°-70°	2431.5	12.2
70°-80°	1379.1	6.9
80°-90°	289.5	1.5
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°	5961.5	29.9
0°-40°	9313.5	46.7
0°-60°	15862.4	79.5
0°-90°	19962.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	19962.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9334	9334	9334	9334	9334	
5°	9325	9218	9310	9329	9300	871
15°	7796	7820	7626	7664	7582	2179
25°	6300	6383	6427	6271	6291	2907
35°	5339	5349	5339	5344	5339	3345
45°	4383	4417	4378	4558	4514	3389
55°	3442	3437	3427	3548	3582	3076
65°	2471	2417	2393	2505	2612	2449
75°	1374	1272	1243	1315	1442	1437
85°	238	214	214	199	209	314
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9334.3	9334.3	9334.3	9334.3	9334.3
2.5°	9392.5	9319.7	9256.6	9358.6	9348.9
5°	9324.6	9217.8	9310.0	9329.4	9300.3
7.5°	9145.0	9077.0	9081.9	9043.1	9038.2
10°	8674.2	8713.0	8635.3	8703.3	8669.3
12.5°	8271.3	8295.5	8159.6	8188.7	8149.9
15°	7795.6	7819.8	7625.7	7664.5	7582.0
17.5°	7276.2	7363.6	7203.4	7251.9	7164.5
20°	6887.9	6960.7	6965.5	6887.9	6611.2
22.5°	6582.1	6654.9	6713.1	6480.1	6451.0
25°	6300.5	6383.1	6426.7	6271.4	6290.8
27.5°	6019.0	6111.2	6111.2	6145.2	6101.5
30°	5815.1	5854.0	5790.9	5917.1	5878.2
32.5°	5572.4	5587.0	5533.6	5625.8	5489.9
35°	5339.4	5349.1	5339.4	5344.3	5339.4
37.5°	5116.1	5091.9	5135.6	5106.4	5198.7
40°	4868.6	4868.6	4888.0	4936.5	5009.4
42.5°	4640.5	4659.9	4635.6	4771.5	4800.6
45°	4383.2	4417.2	4378.3	4557.9	4514.2
47.5°	4150.2	4164.8	4155.1	4276.4	4286.1
50°	3897.8	3917.2	3926.9	4033.7	4048.3
52.5°	3689.1	3684.2	3650.2	3805.6	3829.8
55°	3441.5	3436.7	3426.9	3548.3	3582.3
57.5°	3189.1	3194.0	3218.2	3286.2	3368.7
60°	2961.0	2936.7	2956.1	3038.6	3106.6
62.5°	2728.0	2684.3	2640.6	2776.5	2839.6
65°	2470.7	2417.3	2393.0	2504.7	2611.5
67.5°	2232.9	2145.5	2130.9	2208.6	2334.8
70°	1961.0	1854.2	1849.4	1907.6	2058.1
72.5°	1660.1	1567.9	1543.6	1621.2	1757.2
75°	1373.7	1271.8	1242.6	1315.4	1441.6
77.5°	1063.0	980.5	961.1	999.9	1101.9
80°	747.5	699.0	679.6	694.1	766.9
82.5°	470.8	436.9	427.2	422.3	461.1
85°	237.8	213.6	213.6	199.0	208.7
87.5°	72.8	68.0	63.1	48.5	53.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)