

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: P487091

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-5STD-20-120-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: P487091
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-LD4-5STD-20-120-EDD
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

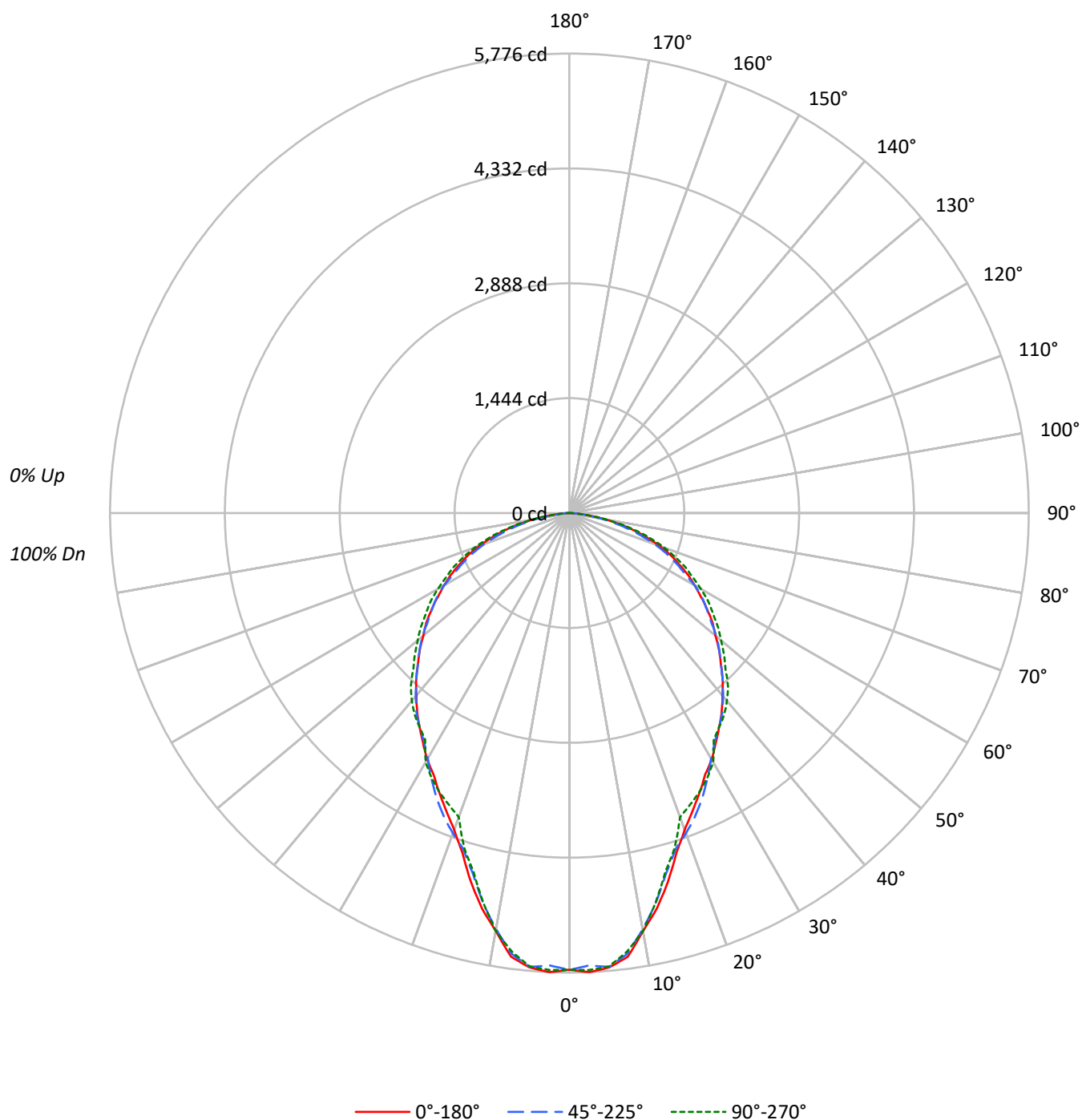
Lumens per Lamp: N/A
Luminaire Lumens: 12276.1 lumens
Efficiency: N/A
Efficacy: 73.7 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 166.5
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					0
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	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°	7723	7723	7723
5°	7745	7733	7725
10°	7288	7255	7284
15°	6678	6532	6495
20°	6065	6133	5821
25°	5752	5867	5743
30°	5556	5533	5616
35°	5393	5393	5393
40°	5259	5280	5411
45°	5129	5123	5282
50°	5017	5055	5211
55°	4965	4944	5168
60°	4900	4892	5141
65°	4837	4685	5113
70°	4744	4474	4979
75°	4392	3973	4609
80°	3562	3238	3654
85°	2259	2027	1982



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	533.1	4.3
10°-20°	1332.9	10.9
20°-30°	1800.0	14.7
30°-40°	2061.3	16.8
40°-50°	2111.5	17.2
50°-60°	1915.9	15.6
60°-70°	1495.3	12.2
70°-80°	848.1	6.9
80°-90°	178.0	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°	3666.1	29.9
0°-40°	5727.4	46.7
0°-60°	9754.7	79.5
0°-90°	12276.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12276.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5740	5740	5740	5740	5740	
5°	5734	5669	5725	5737	5719	536
15°	4794	4809	4690	4713	4663	1340
25°	3875	3925	3952	3857	3869	1788
35°	3284	3290	3284	3286	3284	2057
45°	2696	2716	2692	2803	2776	2084
55°	2116	2113	2107	2182	2203	1891
65°	1519	1486	1472	1540	1606	1506
75°	845	782	764	809	887	884
85°	146	131	131	122	128	193
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5740.2	5740.2	5740.2	5740.2	5740.2
2.5°	5776.0	5731.2	5692.4	5755.1	5749.2
5°	5734.2	5668.6	5725.3	5737.2	5719.3
7.5°	5623.8	5582.0	5585.0	5561.1	5558.1
10°	5334.2	5358.1	5310.4	5352.2	5331.3
12.5°	5086.5	5101.4	5017.8	5035.7	5011.9
15°	4794.0	4808.9	4689.5	4713.4	4662.6
17.5°	4474.6	4528.3	4429.8	4459.6	4405.9
20°	4235.8	4280.5	4283.5	4235.8	4065.6
22.5°	4047.7	4092.5	4128.3	3985.0	3967.1
25°	3874.6	3925.3	3952.2	3856.7	3868.6
27.5°	3701.4	3758.1	3758.1	3779.0	3752.2
30°	3576.1	3599.9	3561.1	3638.7	3614.9
32.5°	3426.8	3435.8	3402.9	3459.6	3376.1
35°	3283.5	3289.5	3283.5	3286.5	3283.5
37.5°	3146.2	3131.3	3158.2	3140.2	3197.0
40°	2994.0	2994.0	3005.9	3035.8	3080.5
42.5°	2853.7	2865.6	2850.7	2934.3	2952.2
45°	2695.5	2716.4	2692.5	2802.9	2776.1
47.5°	2552.2	2561.2	2555.2	2629.8	2635.8
50°	2397.0	2408.9	2414.9	2480.6	2489.5
52.5°	2268.6	2265.6	2244.7	2340.3	2355.2
55°	2116.4	2113.4	2107.4	2182.1	2202.9
57.5°	1961.2	1964.1	1979.1	2020.9	2071.6
60°	1820.9	1805.9	1817.9	1868.6	1910.4
62.5°	1677.6	1650.7	1623.9	1707.4	1746.2
65°	1519.4	1486.5	1471.6	1540.3	1605.9
67.5°	1373.1	1319.4	1310.4	1358.2	1435.8
70°	1206.0	1140.3	1137.3	1173.1	1265.7
72.5°	1020.9	964.2	949.2	997.0	1080.6
75°	844.8	782.1	764.2	808.9	886.6
77.5°	653.7	603.0	591.0	614.9	677.6
80°	459.7	429.8	417.9	426.9	471.6
82.5°	289.5	268.7	262.7	259.7	283.6
85°	146.3	131.3	131.3	122.4	128.4
87.5°	44.8	41.8	38.8	29.9	32.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)