

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: P487086

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-5LO-40-120-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: P487086
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-LD4-5LO-40-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

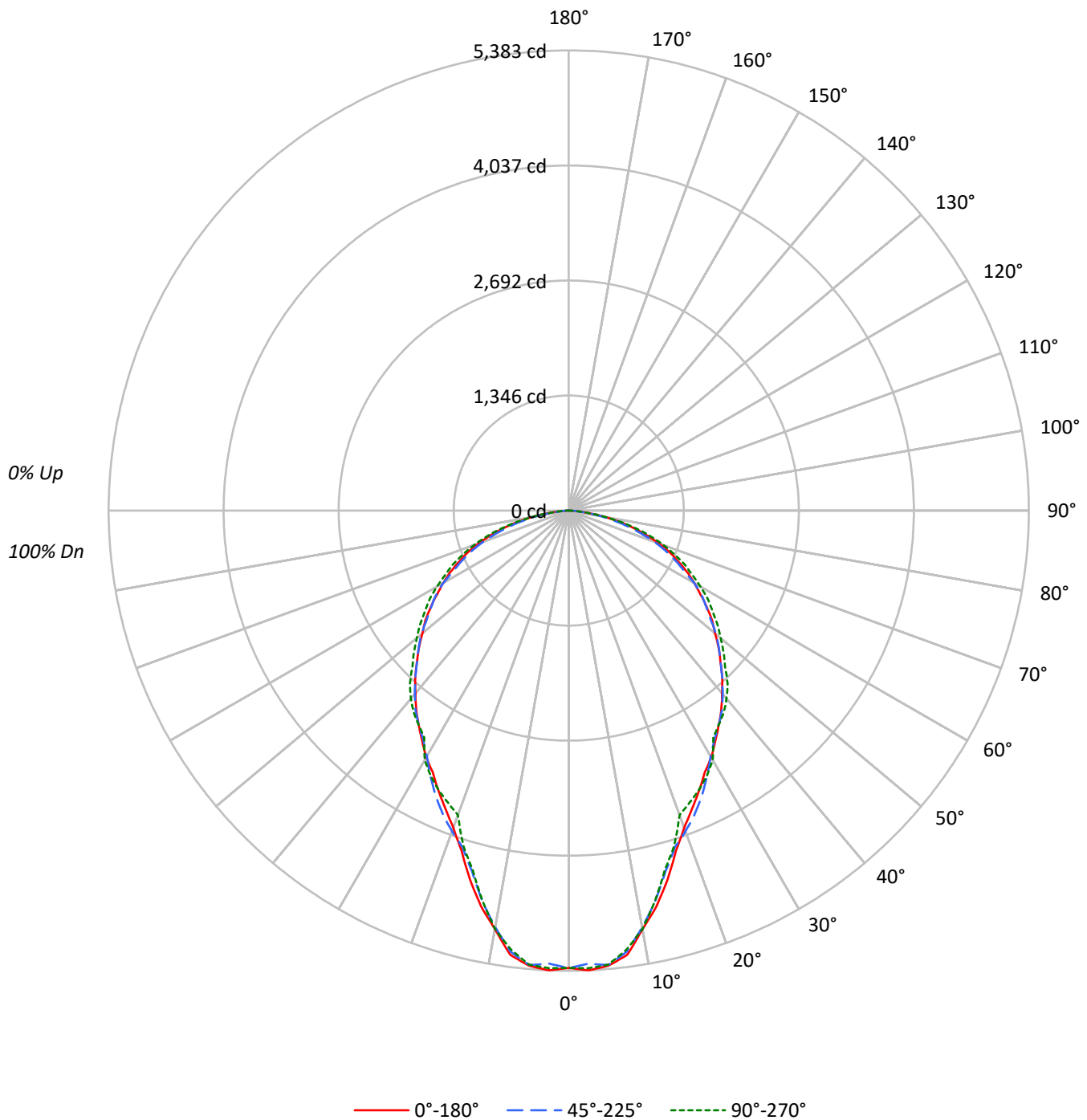
Lumens per Lamp: N/A
Luminaire Lumens: 11440.3 lumens
Efficiency: N/A
Efficacy: 97.8 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 117
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			
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°	7198	7198	7198
5°	7217	7206	7199
10°	6792	6761	6788
15°	6223	6087	6053
20°	5652	5716	5425
25°	5361	5468	5352
30°	5178	5156	5234
35°	5026	5026	5026
40°	4901	4920	5042
45°	4780	4775	4923
50°	4676	4711	4856
55°	4627	4607	4816
60°	4566	4559	4791
65°	4508	4366	4765
70°	4421	4170	4640
75°	4092	3702	4295
80°	3319	3018	3405
85°	2104	1890	1846



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	496.8	4.3
10°-20°	1242.1	10.9
20°-30°	1677.5	14.7
30°-40°	1921.0	16.8
40°-50°	1967.7	17.2
50°-60°	1785.4	15.6
60°-70°	1393.5	12.2
70°-80°	790.3	6.9
80°-90°	165.9	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°	3416.5	29.9
0°-40°	5337.5	46.7
0°-60°	9090.6	79.5
0°-90°	11440.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11440.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5349	5349	5349	5349	5349	
5°	5344	5283	5336	5347	5330	499
15°	4468	4482	4370	4392	4345	1249
25°	3611	3658	3683	3594	3605	1666
35°	3060	3066	3060	3063	3060	1917
45°	2512	2531	2509	2612	2587	1942
55°	1972	1970	1964	2034	2053	1763
65°	1416	1385	1371	1435	1497	1403
75°	787	729	712	754	826	824
85°	136	122	122	114	120	180
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5349.4	5349.4	5349.4	5349.4	5349.4
2.5°	5382.8	5341.0	5304.9	5363.3	5357.7
5°	5343.8	5282.6	5335.5	5346.6	5329.9
7.5°	5240.9	5202.0	5204.7	5182.5	5179.7
10°	4971.1	4993.3	4948.8	4987.8	4968.3
12.5°	4740.2	4754.1	4676.2	4692.9	4670.6
15°	4467.6	4481.5	4370.2	4392.5	4345.2
17.5°	4169.9	4220.0	4128.2	4156.0	4105.9
20°	3947.4	3989.1	3991.9	3947.4	3788.8
22.5°	3772.1	3813.8	3847.2	3713.7	3697.0
25°	3610.8	3658.1	3683.1	3594.1	3605.2
27.5°	3449.4	3502.3	3502.3	3521.8	3496.7
30°	3332.6	3354.8	3318.7	3391.0	3368.8
32.5°	3193.5	3201.8	3171.2	3224.1	3146.2
35°	3060.0	3065.5	3060.0	3062.8	3060.0
37.5°	2932.0	2918.1	2943.1	2926.4	2979.3
40°	2790.1	2790.1	2801.3	2829.1	2870.8
42.5°	2659.4	2670.5	2656.6	2734.5	2751.2
45°	2512.0	2531.4	2509.2	2612.1	2587.1
47.5°	2378.4	2386.8	2381.2	2450.8	2456.3
50°	2233.8	2244.9	2250.5	2311.7	2320.0
52.5°	2114.2	2111.4	2091.9	2180.9	2194.8
55°	1972.3	1969.5	1963.9	2033.5	2053.0
57.5°	1827.6	1830.4	1844.3	1883.3	1930.6
60°	1696.9	1683.0	1694.1	1741.4	1780.3
62.5°	1563.4	1538.3	1513.3	1591.2	1627.3
65°	1415.9	1385.3	1371.4	1435.4	1496.6
67.5°	1279.6	1229.6	1221.2	1265.7	1338.0
70°	1123.8	1062.6	1059.9	1093.2	1179.5
72.5°	951.4	898.5	884.6	929.1	1007.0
75°	787.2	728.8	712.1	753.9	826.2
77.5°	609.2	561.9	550.8	573.0	631.5
80°	428.4	400.6	389.5	397.8	439.5
82.5°	269.8	250.4	244.8	242.0	264.3
85°	136.3	122.4	122.4	114.1	119.6
87.5°	41.7	38.9	36.2	27.8	30.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)