

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: P487084

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-5LO-35-120-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: P487084
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-35-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

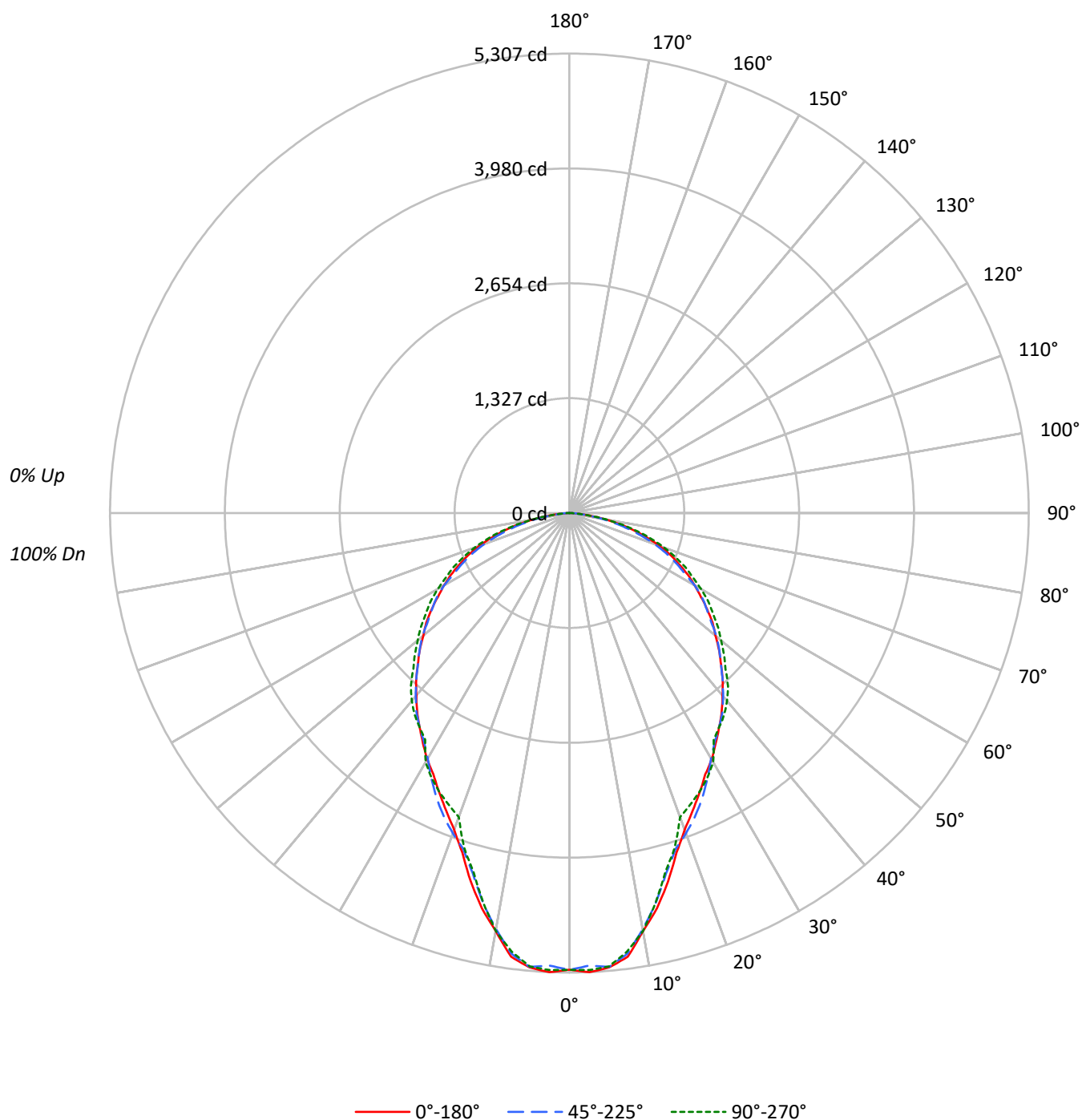
Lumens per Lamp: N/A
Luminaire Lumens: 11280.1 lumens
Efficiency: N/A
Efficacy: 96.4 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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				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°	7097	7097	7097
5°	7116	7105	7098
10°	6697	6667	6693
15°	6136	6002	5968
20°	5573	5636	5349
25°	5285	5391	5277
30°	5105	5084	5161
35°	4956	4956	4956
40°	4832	4851	4972
45°	4713	4708	4854
50°	4610	4645	4788
55°	4562	4542	4748
60°	4502	4495	4724
65°	4445	4305	4698
70°	4359	4111	4575
75°	4035	3650	4235
80°	3273	2975	3358
85°	2075	1863	1820



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	489.9	4.3
10°-20°	1224.7	10.9
20°-30°	1654.0	14.7
30°-40°	1894.1	16.8
40°-50°	1940.1	17.2
50°-60°	1760.4	15.6
60°-70°	1374.0	12.2
70°-80°	779.3	6.9
80°-90°	163.6	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°	3368.6	29.9
0°-40°	5262.7	46.7
0°-60°	8963.3	79.5
0°-90°	11280.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11280.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5274	5274	5274	5274	5274	
5°	5269	5209	5261	5272	5255	492
15°	4405	4419	4309	4331	4284	1231
25°	3560	3607	3632	3544	3555	1643
35°	3017	3023	3017	3020	3017	1890
45°	2477	2496	2474	2576	2551	1915
55°	1945	1942	1936	2005	2024	1738
65°	1396	1366	1352	1415	1476	1384
75°	776	719	702	743	815	812
85°	134	121	121	112	118	177
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5274.5	5274.5	5274.5	5274.5	5274.5
2.5°	5307.4	5266.3	5230.6	5288.2	5282.7
5°	5269.0	5208.7	5260.8	5271.7	5255.3
7.5°	5167.5	5129.1	5131.9	5109.9	5107.2
10°	4901.5	4923.4	4879.5	4917.9	4898.7
12.5°	4673.8	4687.5	4610.7	4627.2	4605.2
15°	4405.0	4418.7	4309.0	4330.9	4284.3
17.5°	4111.5	4160.9	4070.4	4097.8	4048.4
20°	3892.1	3933.2	3936.0	3892.1	3735.7
22.5°	3719.3	3760.4	3793.3	3661.7	3645.2
25°	3560.2	3606.8	3631.5	3543.7	3554.7
27.5°	3401.1	3453.2	3453.2	3472.4	3447.8
30°	3285.9	3307.9	3272.2	3343.5	3321.6
32.5°	3148.8	3157.0	3126.8	3179.0	3102.2
35°	3017.1	3022.6	3017.1	3019.9	3017.1
37.5°	2891.0	2877.2	2901.9	2885.5	2937.6
40°	2751.1	2751.1	2762.0	2789.5	2830.6
42.5°	2622.2	2633.1	2619.4	2696.2	2712.7
45°	2476.8	2496.0	2474.0	2575.5	2550.8
47.5°	2345.1	2353.4	2347.9	2416.4	2421.9
50°	2202.5	2213.5	2219.0	2279.3	2287.5
52.5°	2084.6	2081.8	2062.6	2150.4	2164.1
55°	1944.7	1941.9	1936.4	2005.0	2024.2
57.5°	1802.0	1804.8	1818.5	1856.9	1903.5
60°	1673.1	1659.4	1670.4	1717.0	1755.4
62.5°	1541.5	1516.8	1492.1	1568.9	1604.6
65°	1396.1	1365.9	1352.2	1415.3	1475.6
67.5°	1261.7	1212.3	1204.1	1248.0	1319.3
70°	1108.1	1047.8	1045.0	1077.9	1163.0
72.5°	938.1	885.9	872.2	916.1	992.9
75°	776.2	718.6	702.2	743.3	814.6
77.5°	600.7	554.1	543.1	565.0	622.6
80°	422.4	395.0	384.0	392.2	433.4
82.5°	266.1	246.9	241.4	238.6	260.6
85°	134.4	120.7	120.7	112.5	117.9
87.5°	41.1	38.4	35.7	27.4	30.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)