

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: P487067

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-5HI-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: P487067
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-20-120-EDD
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

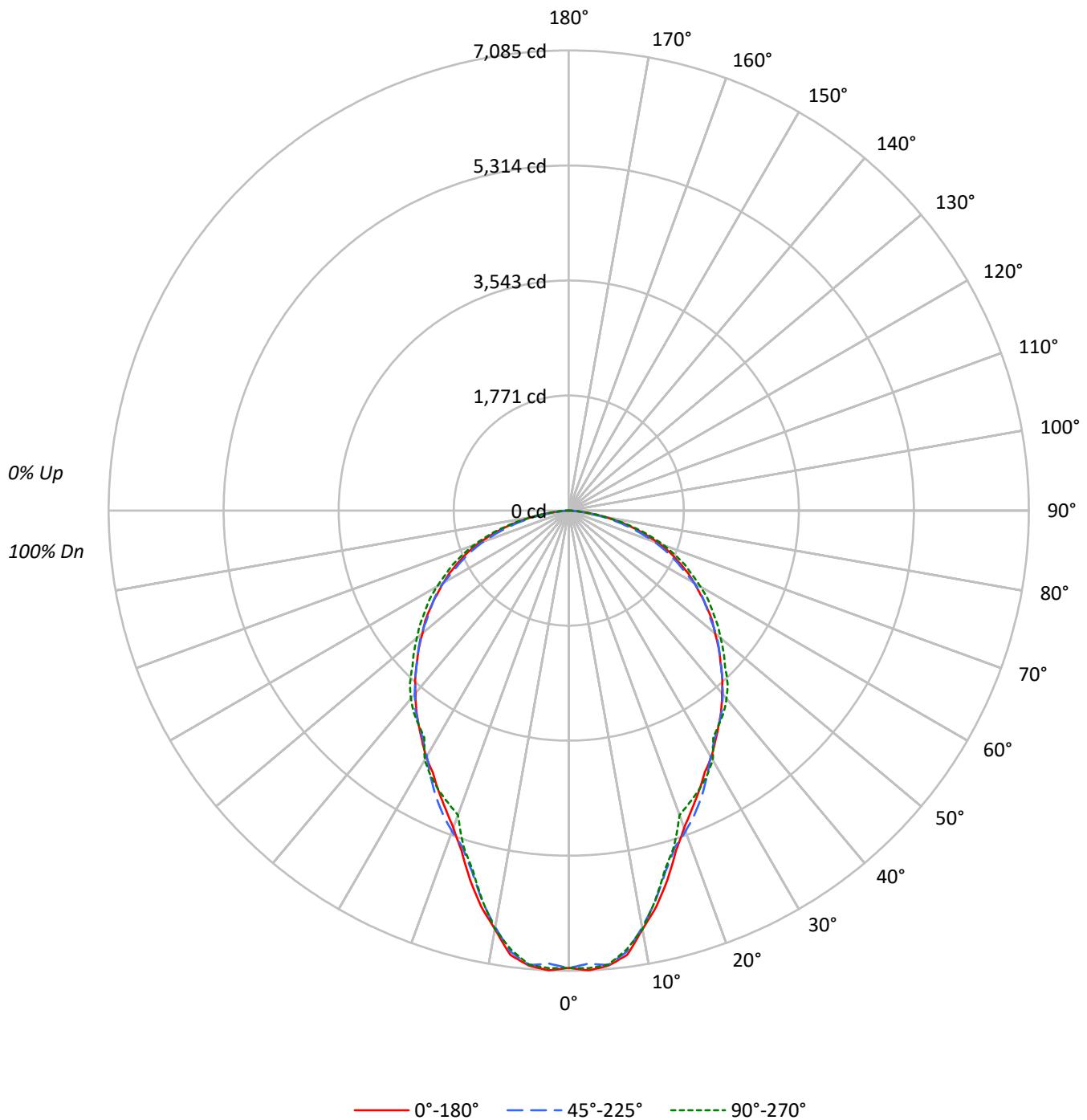
Lumens per Lamp: N/A
Luminaire Lumens: 15057.6 lumens
Efficiency: N/A
Efficacy: 68.4 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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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CATALOG NUMBER: ORLG-24-4-INS-89BC-LD4-5HI-20-120-EDD

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
RCR																				
0	119	119	119	119	116	116	116	116		111	111	111		106	106	106		102	102	102
1	109	104	100	96	106	102	98	95		98	95	92		94	91	89		90	88	86
2	99	91	84	79	97	89	83	78		86	81	76		82	78	74		79	76	73
3	91	80	72	66	88	79	71	65		76	69	64		73	67	63		70	66	62
4	83	71	63	56	81	70	62	56		67	60	55		65	59	54		63	58	53
5	77	64	55	48	75	63	54	48		61	53	48		59	52	47		57	51	47
6	71	58	49	43	69	57	48	42		55	48	42		53	47	42		52	46	41
7	66	53	44	38	64	52	44	38		50	43	37		49	42	37		47	41	37
8	61	48	40	34	60	47	39	34		46	39	34		45	38	33		44	38	33
9	58	44	36	31	56	44	36	31		43	35	30		41	35	30		40	35	30
10	54	41	33	28	53	40	33	28		40	33	28		39	32	28		38	32	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9473	9473	9473
5°	9500	9485	9475
10°	8939	8899	8934
15°	8191	8012	7966
20°	7439	7523	7140
25°	7055	7197	7044
30°	6815	6786	6889
35°	6615	6615	6615
40°	6450	6476	6637
45°	6291	6284	6479
50°	6154	6200	6392
55°	6089	6064	6339
60°	6010	6000	6306
65°	5933	5747	6271
70°	5819	5488	6107
75°	5387	4873	5653
80°	4369	3972	4482
85°	2770	2487	2430



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	653.9	4.3
10°-20°	1634.9	10.9
20°-30°	2207.9	14.7
30°-40°	2528.4	16.8
40°-50°	2589.9	17.2
50°-60°	2349.9	15.6
60°-70°	1834.1	12.2
70°-80°	1040.3	6.9
80°-90°	218.3	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°	4496.7	29.9
0°-40°	7025.1	46.7
0°-60°	11964.9	79.5
0°-90°	15057.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15057.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7041	7041	7041	7041	7041	
5°	7034	6953	7022	7037	7015	657
15°	5880	5898	5752	5781	5719	1643
25°	4752	4815	4848	4730	4745	2193
35°	4028	4035	4028	4031	4028	2523
45°	3306	3332	3303	3438	3405	2556
55°	2596	2592	2585	2676	2702	2320
65°	1864	1823	1805	1889	1970	1847
75°	1036	959	937	992	1087	1084
85°	179	161	161	150	157	237
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7040.8	7040.8	7040.8	7040.8	7040.8
2.5°	7084.7	7029.8	6982.2	7059.1	7051.8
5°	7033.5	6952.9	7022.5	7037.1	7015.2
7.5°	6898.0	6846.8	6850.4	6821.1	6817.5
10°	6542.9	6572.2	6513.6	6564.8	6539.2
12.5°	6239.0	6257.3	6154.8	6176.7	6147.4
15°	5880.2	5898.5	5752.0	5781.3	5719.1
17.5°	5488.4	5554.3	5433.5	5470.1	5404.2
20°	5195.5	5250.4	5254.1	5195.5	4986.8
22.5°	4964.8	5019.7	5063.7	4887.9	4866.0
25°	4752.5	4814.7	4847.7	4730.5	4745.1
27.5°	4540.1	4609.7	4609.7	4635.3	4602.3
30°	4386.3	4415.6	4368.0	4463.2	4433.9
32.5°	4203.2	4214.2	4174.0	4243.5	4141.0
35°	4027.5	4034.8	4027.5	4031.2	4027.5
37.5°	3859.1	3840.8	3873.7	3851.8	3921.3
40°	3672.4	3672.4	3687.0	3723.6	3778.5
42.5°	3500.3	3514.9	3496.6	3599.1	3621.1
45°	3306.2	3331.8	3302.6	3438.0	3405.1
47.5°	3130.5	3141.5	3134.1	3225.7	3233.0
50°	2940.1	2954.7	2962.0	3042.6	3053.6
52.5°	2782.6	2779.0	2753.3	2870.5	2888.8
55°	2595.9	2592.2	2584.9	2676.5	2702.1
57.5°	2405.5	2409.2	2427.5	2478.7	2541.0
60°	2233.4	2215.1	2229.8	2292.0	2343.3
62.5°	2057.7	2024.7	1991.8	2094.3	2141.9
65°	1863.6	1823.4	1805.1	1889.3	1969.8
67.5°	1684.2	1618.3	1607.3	1665.9	1761.1
70°	1479.2	1398.6	1395.0	1438.9	1552.4
72.5°	1252.2	1182.6	1164.3	1222.9	1325.4
75°	1036.2	959.3	937.3	992.2	1087.4
77.5°	801.8	739.6	725.0	754.2	831.1
80°	563.9	527.2	512.6	523.6	578.5
82.5°	355.2	329.5	322.2	318.5	347.8
85°	179.4	161.1	161.1	150.1	157.4
87.5°	54.9	51.3	47.6	36.6	40.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)