

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: P487072

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-5HI-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: P487072
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-35-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

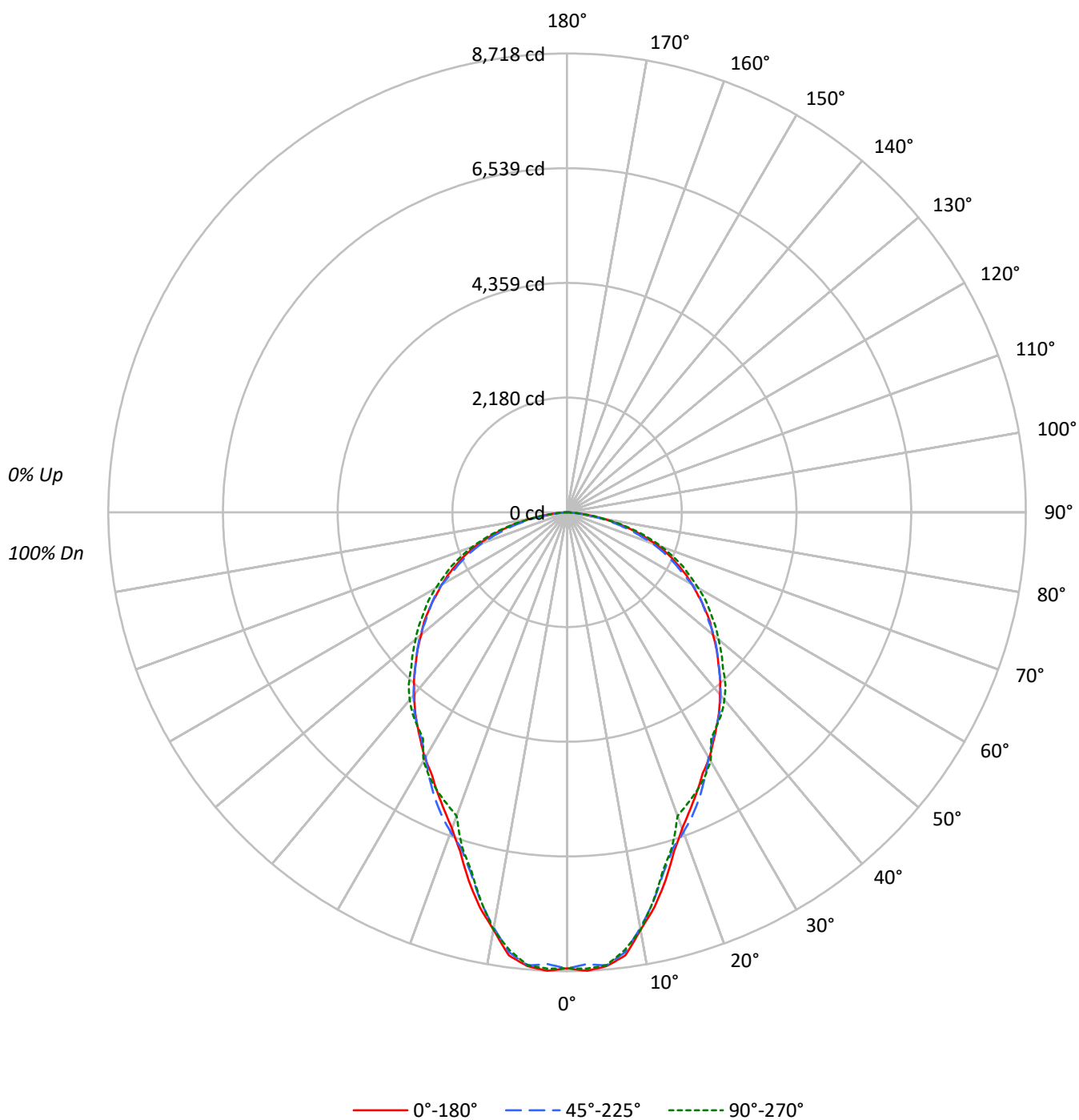
Lumens per Lamp: N/A
Luminaire Lumens: 18528.6 lumens
Efficiency: N/A
Efficacy: 84.2 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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					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°	11657	11657	11657
5°	11689	11671	11659
10°	11000	10950	10994
15°	10079	9859	9803
20°	9154	9257	8786
25°	8682	8856	8668
30°	8386	8351	8477
35°	8140	8140	8140
40°	7937	7969	8166
45°	7741	7733	7973
50°	7573	7629	7865
55°	7493	7461	7800
60°	7396	7384	7759
65°	7301	7071	7717
70°	7161	6753	7515
75°	6628	5996	6956
80°	5376	4888	5515
85°	3409	3060	2990



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	804.7	4.3
10°-20°	2011.8	10.9
20°-30°	2716.9	14.7
30°-40°	3111.2	16.8
40°-50°	3186.9	17.2
50°-60°	2891.6	15.6
60°-70°	2256.9	12.2
70°-80°	1280.1	6.9
80°-90°	268.7	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°	5533.3	29.9
0°-40°	8644.5	46.7
0°-60°	14723.0	79.5
0°-90°	18528.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18528.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8664	8664	8664	8664	8664	
5°	8655	8556	8641	8659	8632	808
15°	7236	7258	7078	7114	7037	2022
25°	5848	5925	5965	5821	5839	2699
35°	4956	4965	4956	4960	4956	3104
45°	4068	4100	4064	4230	4190	3146
55°	3194	3190	3181	3293	3325	2855
65°	2293	2244	2221	2325	2424	2273
75°	1275	1180	1153	1221	1338	1334
85°	221	198	198	185	194	292
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8663.8	8663.8	8663.8	8663.8	8663.8
2.5°	8717.9	8650.3	8591.7	8686.3	8677.3
5°	8654.8	8555.7	8641.3	8659.3	8632.3
7.5°	8488.1	8425.0	8429.5	8393.5	8389.0
10°	8051.1	8087.1	8015.0	8078.1	8046.6
12.5°	7677.1	7699.7	7573.5	7600.6	7564.5
15°	7235.6	7258.1	7077.9	7114.0	7037.4
17.5°	6753.5	6834.6	6686.0	6731.0	6649.9
20°	6393.1	6460.7	6465.2	6393.1	6136.3
22.5°	6109.3	6176.9	6230.9	6014.7	5987.6
25°	5848.0	5924.6	5965.1	5820.9	5839.0
27.5°	5586.7	5672.3	5672.3	5703.8	5663.2
30°	5397.4	5433.5	5374.9	5492.0	5456.0
32.5°	5172.2	5185.7	5136.1	5221.7	5095.6
35°	4955.9	4964.9	4955.9	4960.4	4955.9
37.5°	4748.7	4726.1	4766.7	4739.6	4825.2
40°	4518.9	4518.9	4536.9	4582.0	4649.5
42.5°	4307.1	4325.2	4302.6	4428.8	4455.8
45°	4068.3	4099.9	4063.8	4230.5	4190.0
47.5°	3852.1	3865.6	3856.6	3969.2	3978.2
50°	3617.8	3635.8	3644.8	3744.0	3757.5
52.5°	3424.1	3419.6	3388.0	3532.2	3554.7
55°	3194.3	3189.8	3180.8	3293.4	3325.0
57.5°	2960.0	2964.5	2987.1	3050.1	3126.7
60°	2748.3	2725.7	2743.8	2820.4	2883.4
62.5°	2532.0	2491.5	2450.9	2577.1	2635.6
65°	2293.2	2243.7	2221.1	2324.8	2423.9
67.5°	2072.5	1991.4	1977.9	2049.9	2167.1
70°	1820.2	1721.1	1716.5	1770.6	1910.3
72.5°	1540.8	1455.2	1432.7	1504.8	1630.9
75°	1275.0	1180.4	1153.4	1221.0	1338.1
77.5°	986.7	910.1	892.1	928.1	1022.7
80°	693.8	648.8	630.8	644.3	711.8
82.5°	437.0	405.5	396.5	392.0	428.0
85°	220.8	198.2	198.2	184.7	193.7
87.5°	67.6	63.1	58.6	45.1	49.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)