

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: P487047

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-4LO-30-120-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: P487047
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-LD4-4LO-30-120-EDD
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

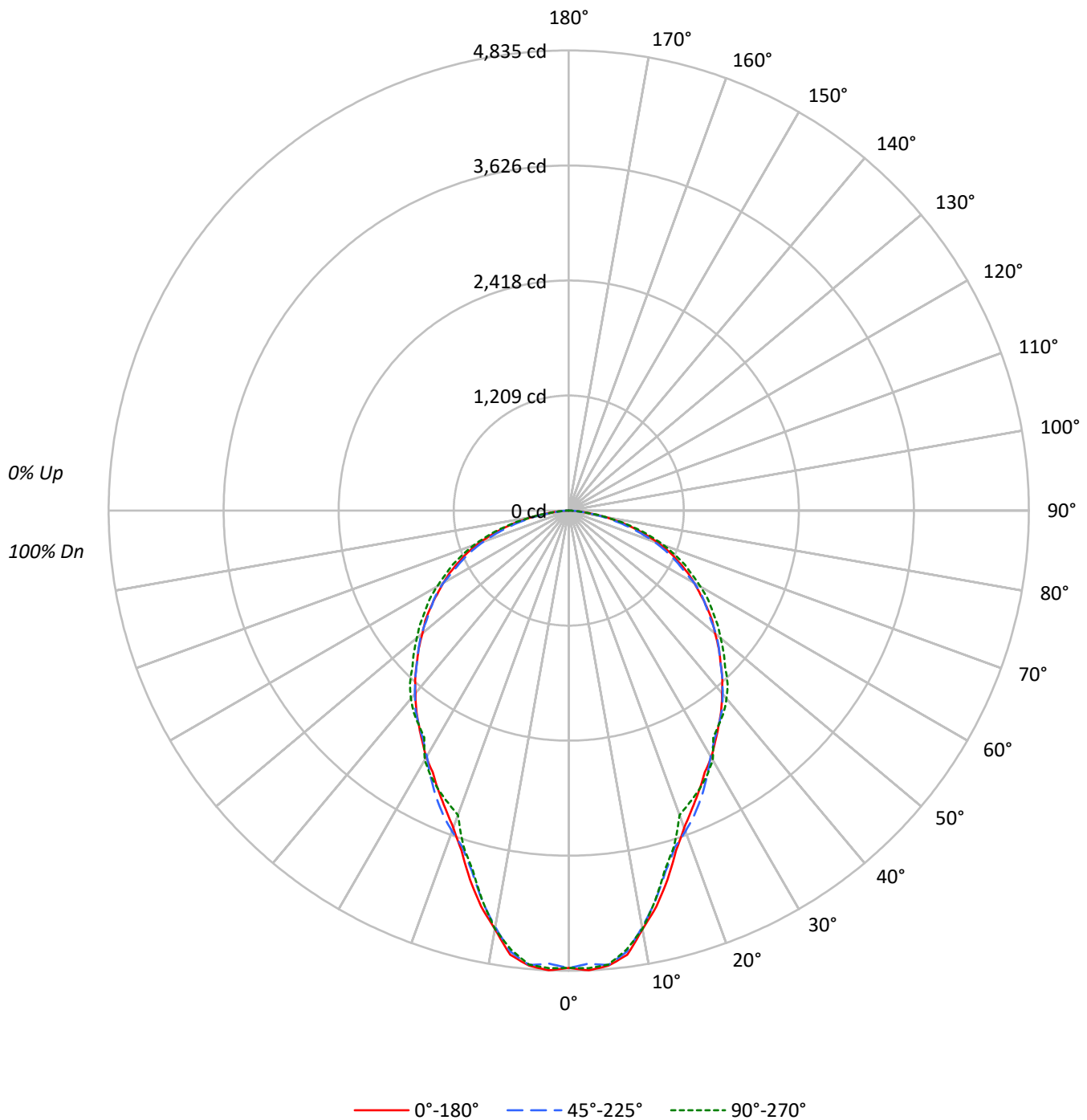
Lumens per Lamp: N/A
Luminaire Lumens: 10275.3 lumens
Efficiency: N/A
Efficacy: 109.8 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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		100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84		84
2	99	91	84	79	97	89	83	78	86	81	76	82	78	74	79	76	73	70		70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60		60
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51		51
5	77	64	55	48	75	63	54	48	61	53	48	59	52	47	57	51	47	45		45
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39		39
7	66	53	44	38	64	52	44	38	50	43	37	49	42	37	47	41	37	35		35
8	61	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31		31
9	58	44	36	31	56	44	36	31	43	35	30	41	35	30	40	35	30	28		28
10	54	41	33	28	53	40	33	28	40	33	28	39	32	28	38	32	28	26		26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6465	6465	6465
5°	6482	6472	6466
10°	6100	6073	6097
15°	5589	5468	5436
20°	5076	5134	4873
25°	4815	4911	4807
30°	4650	4631	4701
35°	4514	4514	4514
40°	4402	4419	4529
45°	4293	4288	4421
50°	4200	4231	4362
55°	4155	4138	4325
60°	4101	4095	4303
65°	4049	3922	4280
70°	3971	3745	4168
75°	3676	3325	3858
80°	2982	2710	3059
85°	1890	1697	1658



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	446.2	4.3
10°-20°	1115.7	10.9
20°-30°	1506.7	14.7
30°-40°	1725.4	16.8
40°-50°	1767.3	17.2
50°-60°	1603.6	15.6
60°-70°	1251.6	12.2
70°-80°	709.9	6.9
80°-90°	149.0	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°	3068.6	29.9
0°-40°	4793.9	46.7
0°-60°	8164.8	79.5
0°-90°	10275.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10275.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4805	4805	4805	4805	4805	
5°	4800	4745	4792	4802	4787	448
15°	4013	4025	3925	3945	3903	1121
25°	3243	3286	3308	3228	3238	1497
35°	2748	2753	2748	2751	2748	1722
45°	2256	2274	2254	2346	2324	1744
55°	1771	1769	1764	1826	1844	1583
65°	1272	1244	1232	1289	1344	1260
75°	707	655	640	677	742	740
85°	122	110	110	102	107	162
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4804.6	4804.6	4804.6	4804.6	4804.6
2.5°	4834.6	4797.2	4764.7	4817.1	4812.1
5°	4799.6	4744.7	4792.2	4802.1	4787.2
7.5°	4707.2	4672.2	4674.7	4654.7	4652.2
10°	4464.8	4484.8	4444.9	4479.8	4462.3
12.5°	4257.5	4270.0	4200.0	4215.0	4195.0
15°	4012.6	4025.1	3925.2	3945.2	3902.7
17.5°	3745.3	3790.2	3707.8	3732.8	3687.8
20°	3545.4	3582.9	3585.4	3545.4	3403.0
22.5°	3388.0	3425.5	3455.4	3335.5	3320.5
25°	3243.1	3285.5	3308.0	3228.1	3238.1
27.5°	3098.2	3145.6	3145.6	3163.1	3140.6
30°	2993.2	3013.2	2980.7	3045.7	3025.7
32.5°	2868.3	2875.8	2848.3	2895.8	2825.8
35°	2748.4	2753.4	2748.4	2750.9	2748.4
37.5°	2633.4	2620.9	2643.4	2628.4	2675.9
40°	2506.0	2506.0	2516.0	2541.0	2578.5
42.5°	2388.6	2398.6	2386.1	2456.0	2471.0
45°	2256.2	2273.6	2253.7	2346.1	2323.6
47.5°	2136.2	2143.7	2138.7	2201.2	2206.2
50°	2006.3	2016.3	2021.3	2076.3	2083.8
52.5°	1898.9	1896.4	1878.9	1958.8	1971.3
55°	1771.4	1768.9	1764.0	1826.4	1843.9
57.5°	1641.5	1644.0	1656.5	1691.5	1734.0
60°	1524.1	1511.6	1521.6	1564.1	1599.1
62.5°	1404.2	1381.7	1359.2	1429.2	1461.6
65°	1271.7	1244.3	1231.8	1289.2	1344.2
67.5°	1149.3	1104.3	1096.8	1136.8	1201.8
70°	1009.4	954.4	951.9	981.9	1059.4
72.5°	854.5	807.0	794.5	834.5	904.5
75°	707.1	654.6	639.6	677.1	742.1
77.5°	547.2	504.7	494.7	514.7	567.2
80°	384.8	359.8	349.8	357.3	394.8
82.5°	242.4	224.9	219.9	217.4	237.4
85°	122.4	109.9	109.9	102.4	107.4
87.5°	37.5	35.0	32.5	25.0	27.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)