

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: P487056

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-4STD-27-120-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: P487056
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-LD4-4STD-27-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

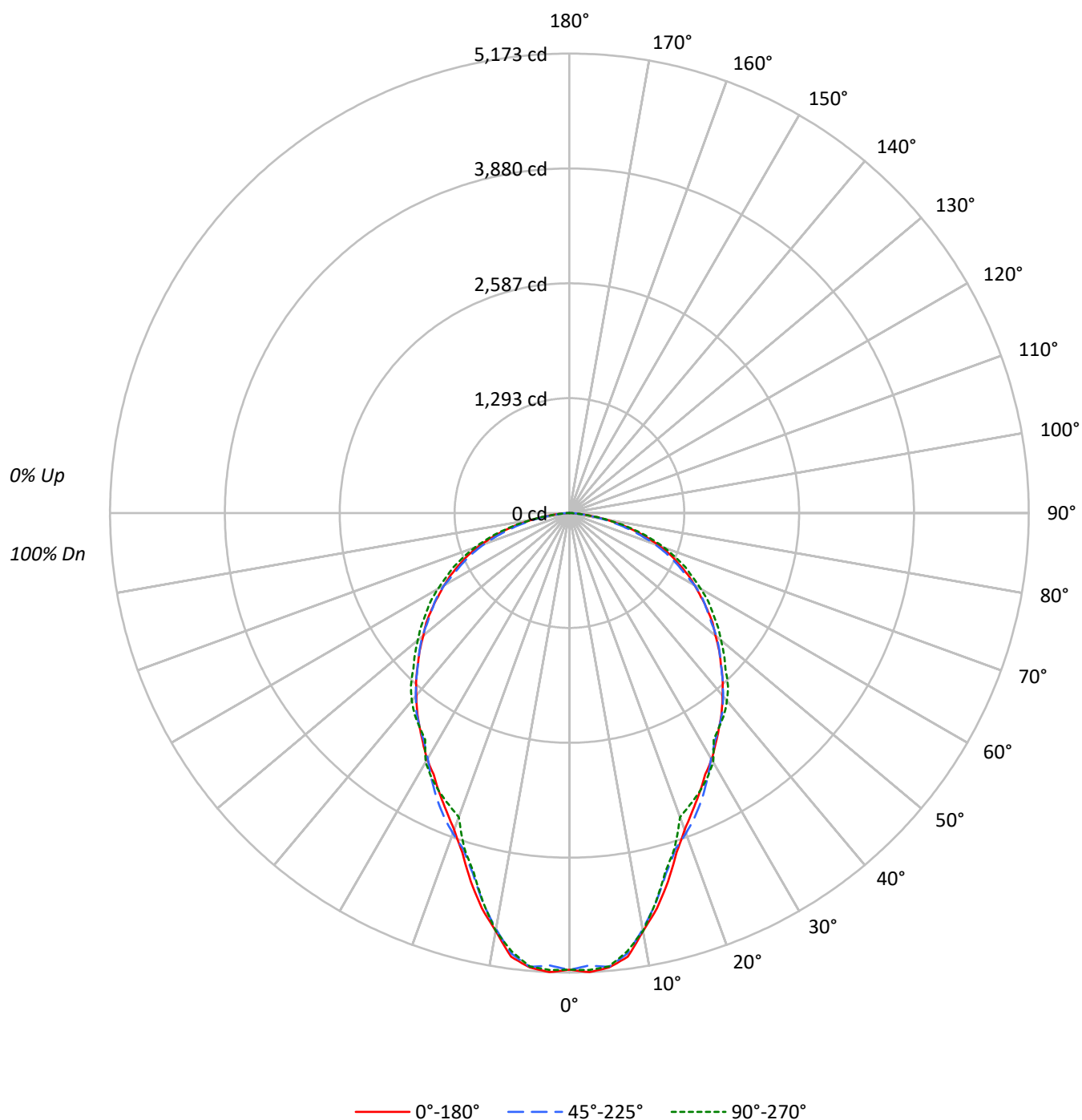
Lumens per Lamp: N/A
Luminaire Lumens: 10993.9 lumens
Efficiency: N/A
Efficacy: 82.5 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
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°	6917	6917	6917
5°	6936	6925	6918
10°	6527	6497	6523
15°	5980	5850	5816
20°	5431	5493	5213
25°	5151	5255	5143
30°	4976	4955	5030
35°	4830	4830	4830
40°	4709	4728	4846
45°	4593	4588	4731
50°	4493	4527	4667
55°	4446	4427	4628
60°	4388	4381	4604
65°	4332	4196	4579
70°	4249	4007	4459
75°	3933	3558	4128
80°	3190	2900	3273
85°	2022	1815	1774



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	477.5	4.3
10°-20°	1193.7	10.9
20°-30°	1612.0	14.7
30°-40°	1846.0	16.8
40°-50°	1890.9	17.2
50°-60°	1715.8	15.6
60°-70°	1339.1	12.2
70°-80°	759.5	6.9
80°-90°	159.4	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°	3283.2	29.9
0°-40°	5129.2	46.7
0°-60°	8735.9	79.5
0°-90°	10993.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10993.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5141	5141	5141	5141	5141	
5°	5135	5076	5127	5138	5122	480
15°	4293	4307	4200	4221	4176	1200
25°	3470	3515	3539	3454	3464	1601
35°	2941	2946	2941	2943	2941	1842
45°	2414	2433	2411	2510	2486	1866
55°	1895	1893	1887	1954	1973	1694
65°	1361	1331	1318	1379	1438	1349
75°	756	700	684	724	794	791
85°	131	118	118	110	115	173
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5140.7	5140.7	5140.7	5140.7	5140.7
2.5°	5172.7	5132.6	5097.9	5154.0	5148.7
5°	5135.3	5076.5	5127.3	5138.0	5121.9
7.5°	5036.4	4999.0	5001.6	4980.3	4977.6
10°	4777.1	4798.5	4755.7	4793.1	4774.4
12.5°	4555.2	4568.6	4493.7	4509.8	4488.4
15°	4293.2	4306.6	4199.7	4221.1	4175.6
17.5°	4007.2	4055.3	3967.1	3993.8	3945.7
20°	3793.3	3833.4	3836.1	3793.3	3641.0
22.5°	3624.9	3665.0	3697.1	3568.8	3552.7
25°	3469.9	3515.3	3539.4	3453.8	3464.5
27.5°	3314.8	3365.6	3365.6	3384.3	3360.3
30°	3202.6	3223.9	3189.2	3258.7	3237.3
32.5°	3068.9	3076.9	3047.5	3098.3	3023.4
35°	2940.6	2945.9	2940.6	2943.2	2940.6
37.5°	2817.6	2804.2	2828.3	2812.3	2863.0
40°	2681.3	2681.3	2692.0	2718.7	2758.8
42.5°	2555.6	2566.3	2553.0	2627.8	2643.8
45°	2413.9	2432.7	2411.3	2510.2	2486.1
47.5°	2285.6	2293.6	2288.3	2355.1	2360.5
50°	2146.6	2157.3	2162.7	2221.5	2229.5
52.5°	2031.7	2029.0	2010.3	2095.8	2109.2
55°	1895.3	1892.7	1887.3	1954.1	1972.9
57.5°	1756.3	1759.0	1772.4	1809.8	1855.2
60°	1630.7	1617.3	1628.0	1673.5	1710.9
62.5°	1502.4	1478.3	1454.2	1529.1	1563.9
65°	1360.7	1331.3	1317.9	1379.4	1438.2
67.5°	1229.7	1181.6	1173.6	1216.3	1285.8
70°	1080.0	1021.2	1018.5	1050.6	1133.5
72.5°	914.3	863.5	850.1	892.9	967.7
75°	756.5	700.4	684.4	724.5	794.0
77.5°	585.4	540.0	529.3	550.7	606.8
80°	411.7	384.9	374.3	382.3	422.4
82.5°	259.3	240.6	235.2	232.6	254.0
85°	131.0	117.6	117.6	109.6	114.9
87.5°	40.1	37.4	34.8	26.7	29.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)