

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: P487118

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-6LO-30-120-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: P487118
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-LD4-6LO-30-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

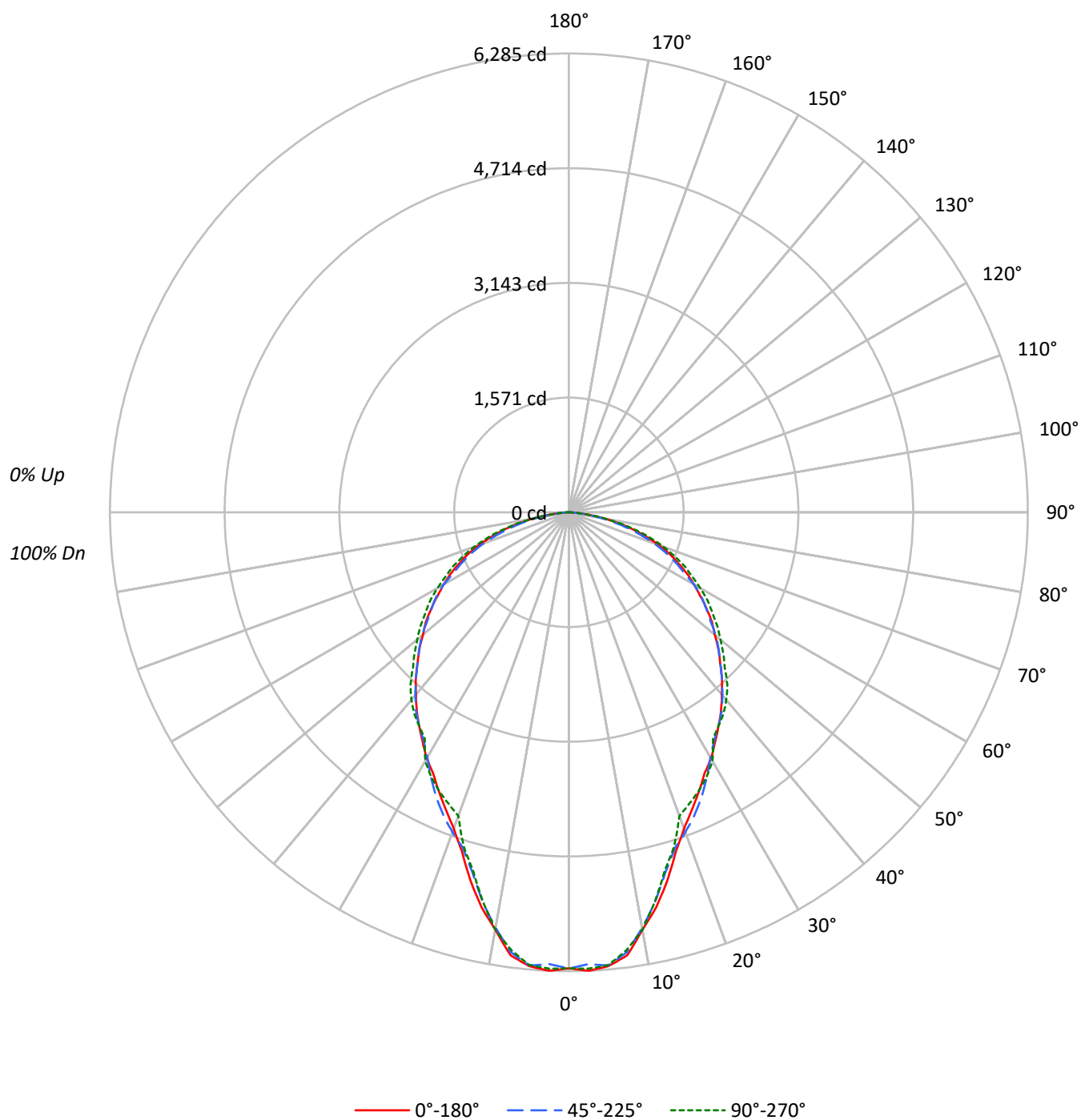
Lumens per Lamp: N/A
Luminaire Lumens: 13357.7 lumens
Efficiency: N/A
Efficacy: 95.1 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 140.4
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°	8404	8404	8404
5°	8427	8414	8405
10°	7930	7894	7926
15°	7266	7108	7067
20°	6599	6674	6334
25°	6259	6384	6249
30°	6045	6020	6111
35°	5868	5868	5868
40°	5722	5745	5887
45°	5581	5575	5748
50°	5460	5500	5670
55°	5402	5379	5623
60°	5332	5323	5594
65°	5263	5098	5563
70°	5162	4868	5418
75°	4779	4323	5015
80°	3876	3523	3976
85°	2458	2206	2157



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	580.1	4.3
10°-20°	1450.3	10.9
20°-30°	1958.6	14.7
30°-40°	2242.9	16.8
40°-50°	2297.5	17.2
50°-60°	2084.7	15.6
60°-70°	1627.0	12.2
70°-80°	922.8	6.9
80°-90°	193.7	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°	3989.1	29.9
0°-40°	6232.0	46.7
0°-60°	10614.2	79.5
0°-90°	13357.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13357.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6246	6246	6246	6246	6246	
5°	6240	6168	6230	6243	6223	583
15°	5216	5233	5103	5129	5073	1458
25°	4216	4271	4300	4196	4209	1945
35°	3573	3579	3573	3576	3573	2238
45°	2933	2956	2930	3050	3021	2268
55°	2303	2300	2293	2374	2397	2058
65°	1653	1618	1601	1676	1747	1638
75°	919	851	832	880	965	962
85°	159	143	143	133	140	210
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6246.0	6246.0	6246.0	6246.0	6246.0
2.5°	6284.9	6236.2	6194.0	6262.2	6255.7
5°	6239.5	6168.0	6229.7	6242.7	6223.2
7.5°	6119.3	6073.8	6077.1	6051.1	6047.8
10°	5804.2	5830.2	5778.2	5823.7	5801.0
12.5°	5534.6	5550.9	5459.9	5479.4	5453.4
15°	5216.3	5232.6	5102.6	5128.6	5073.4
17.5°	4868.8	4927.3	4820.1	4852.5	4794.1
20°	4608.9	4657.7	4660.9	4608.9	4423.8
22.5°	4404.3	4453.0	4492.0	4336.1	4316.6
25°	4215.9	4271.2	4300.4	4196.4	4209.4
27.5°	4027.6	4089.3	4089.3	4112.0	4082.8
30°	3891.1	3917.1	3874.9	3959.3	3933.4
32.5°	3728.7	3738.5	3702.7	3764.5	3673.5
35°	3572.8	3579.3	3572.8	3576.1	3572.8
37.5°	3423.4	3407.2	3436.4	3416.9	3478.6
40°	3257.8	3257.8	3270.8	3303.2	3352.0
42.5°	3105.1	3118.1	3101.9	3192.8	3212.3
45°	2933.0	2955.7	2929.7	3049.9	3020.7
47.5°	2777.1	2786.8	2780.3	2861.5	2868.0
50°	2608.2	2621.2	2627.7	2699.1	2708.9
52.5°	2468.5	2465.3	2442.5	2546.5	2562.7
55°	2302.8	2299.6	2293.1	2374.3	2397.0
57.5°	2134.0	2137.2	2153.4	2198.9	2254.1
60°	1981.3	1965.1	1978.0	2033.3	2078.7
62.5°	1825.4	1796.2	1766.9	1857.9	1900.1
65°	1653.2	1617.5	1601.3	1676.0	1747.4
67.5°	1494.1	1435.6	1425.9	1477.9	1562.3
70°	1312.2	1240.7	1237.5	1276.5	1377.2
72.5°	1110.8	1049.1	1032.9	1084.8	1175.8
75°	919.2	851.0	831.5	880.2	964.7
77.5°	711.3	656.1	643.1	669.1	737.3
80°	500.2	467.7	454.7	464.5	513.2
82.5°	315.1	292.3	285.8	282.6	308.6
85°	159.2	142.9	142.9	133.2	139.7
87.5°	48.7	45.5	42.2	32.5	35.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)