

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: P487089

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-5LO-50-120-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: P487089
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-LD4-5LO-50-120-EDD
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

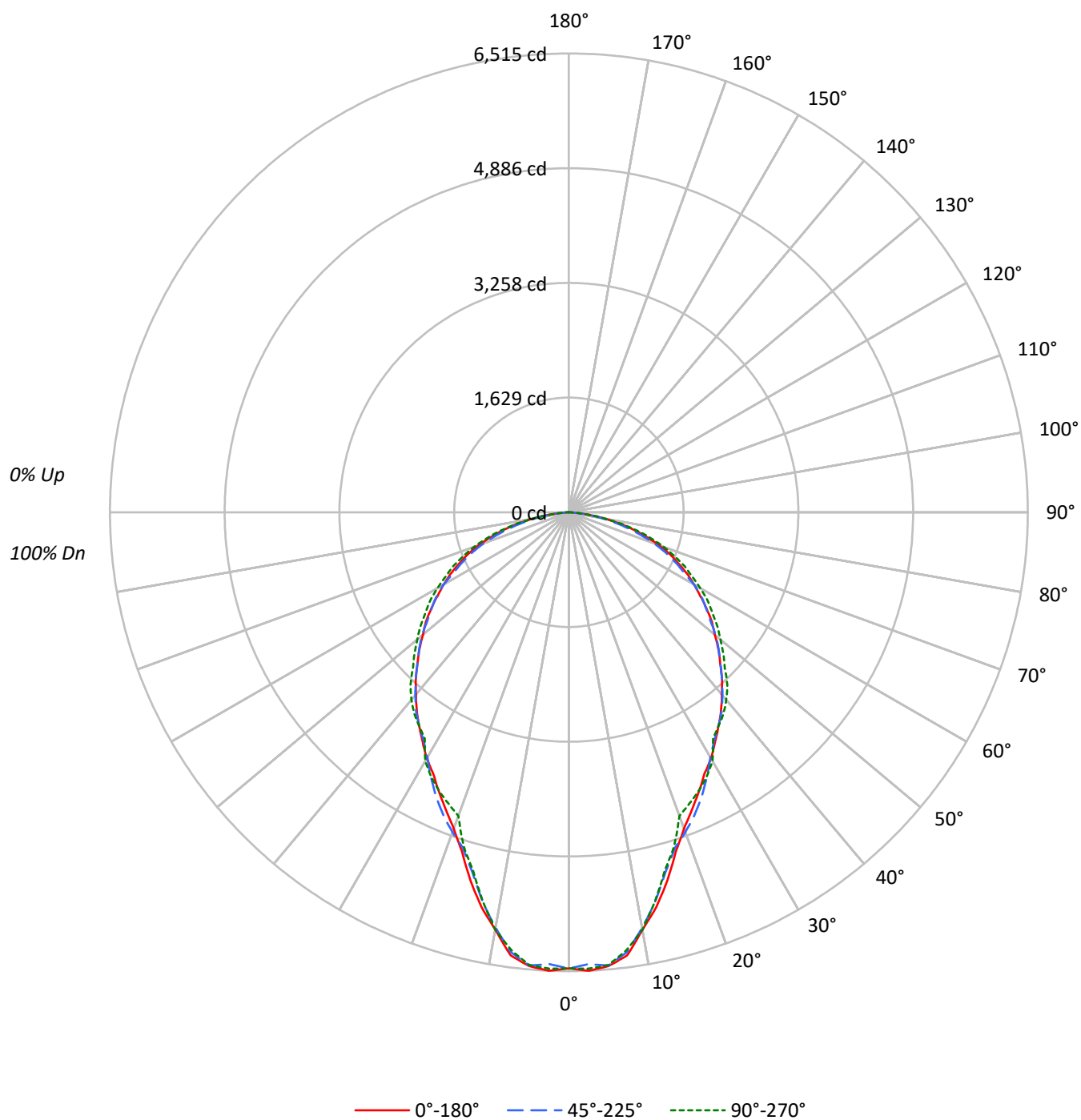
Lumens per Lamp: N/A
Luminaire Lumens: 13846.7 lumens
Efficiency: N/A
Efficacy: 118.3 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 117
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°	8712	8712	8712
5°	8736	8722	8713
10°	8220	8184	8216
15°	7532	7368	7326
20°	6841	6918	6566
25°	6488	6618	6478
30°	6267	6240	6335
35°	6083	6083	6083
40°	5931	5955	6103
45°	5785	5779	5958
50°	5659	5701	5878
55°	5600	5576	5829
60°	5527	5518	5799
65°	5456	5285	5767
70°	5351	5046	5616
75°	4953	4481	5199
80°	4018	3653	4122
85°	2547	2286	2235



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	601.4	4.3
10°-20°	1503.4	10.9
20°-30°	2030.3	14.7
30°-40°	2325.0	16.8
40°-50°	2381.6	17.2
50°-60°	2161.0	15.6
60°-70°	1686.6	12.2
70°-80°	956.6	6.9
80°-90°	200.8	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°	4135.1	29.9
0°-40°	6460.2	46.7
0°-60°	11002.7	79.5
0°-90°	13846.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13846.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6475	6475	6475	6475	6475	
5°	6468	6394	6458	6471	6451	604
15°	5407	5424	5289	5316	5259	1511
25°	4370	4428	4458	4350	4364	2017
35°	3704	3710	3704	3707	3704	2320
45°	3040	3064	3037	3162	3131	2351
55°	2387	2384	2377	2461	2485	2133
65°	1714	1677	1660	1737	1811	1698
75°	953	882	862	912	1000	997
85°	165	148	148	138	145	218
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6474.6	6474.6	6474.6	6474.6	6474.6
2.5°	6515.0	6464.5	6420.7	6491.4	6484.7
5°	6467.9	6393.8	6457.8	6471.2	6451.0
7.5°	6343.3	6296.2	6299.5	6272.6	6269.2
10°	6016.7	6043.6	5989.8	6036.9	6013.3
12.5°	5737.2	5754.1	5659.8	5680.0	5653.1
15°	5407.3	5424.1	5289.4	5316.4	5259.1
17.5°	5047.0	5107.6	4996.5	5030.2	4969.6
20°	4777.7	4828.2	4831.5	4777.7	4585.8
22.5°	4565.6	4616.1	4656.5	4494.8	4474.6
25°	4370.3	4427.5	4457.8	4350.1	4363.5
27.5°	4175.0	4239.0	4239.0	4262.5	4232.2
30°	4033.6	4060.5	4016.7	4104.3	4077.4
32.5°	3865.2	3875.3	3838.3	3902.3	3808.0
35°	3703.6	3710.4	3703.6	3707.0	3703.6
37.5°	3548.7	3531.9	3562.2	3542.0	3606.0
40°	3377.0	3377.0	3390.5	3424.2	3474.7
42.5°	3218.8	3232.3	3215.4	3309.7	3329.9
45°	3040.3	3063.9	3037.0	3161.5	3131.2
47.5°	2878.7	2888.8	2882.1	2966.3	2973.0
50°	2703.6	2717.1	2723.8	2797.9	2808.0
52.5°	2558.9	2555.5	2531.9	2639.7	2656.5
55°	2387.2	2383.8	2377.1	2461.2	2484.8
57.5°	2212.1	2215.4	2232.3	2279.4	2336.6
60°	2053.8	2037.0	2050.5	2107.7	2154.8
62.5°	1892.2	1861.9	1831.6	1925.9	1969.7
65°	1713.8	1676.7	1659.9	1737.3	1811.4
67.5°	1548.8	1488.2	1478.1	1532.0	1619.5
70°	1360.2	1286.2	1282.8	1323.2	1427.6
72.5°	1151.5	1087.5	1070.7	1124.6	1218.8
75°	952.8	882.1	861.9	912.4	1000.0
77.5°	737.4	680.1	666.7	693.6	764.3
80°	518.5	484.8	471.4	481.5	532.0
82.5°	326.6	303.0	296.3	292.9	319.9
85°	165.0	148.1	148.1	138.0	144.8
87.5°	50.5	47.1	43.8	33.7	37.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)