

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: P487026

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-3STD-40-120-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: P487026
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-LD4-3STD-40-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

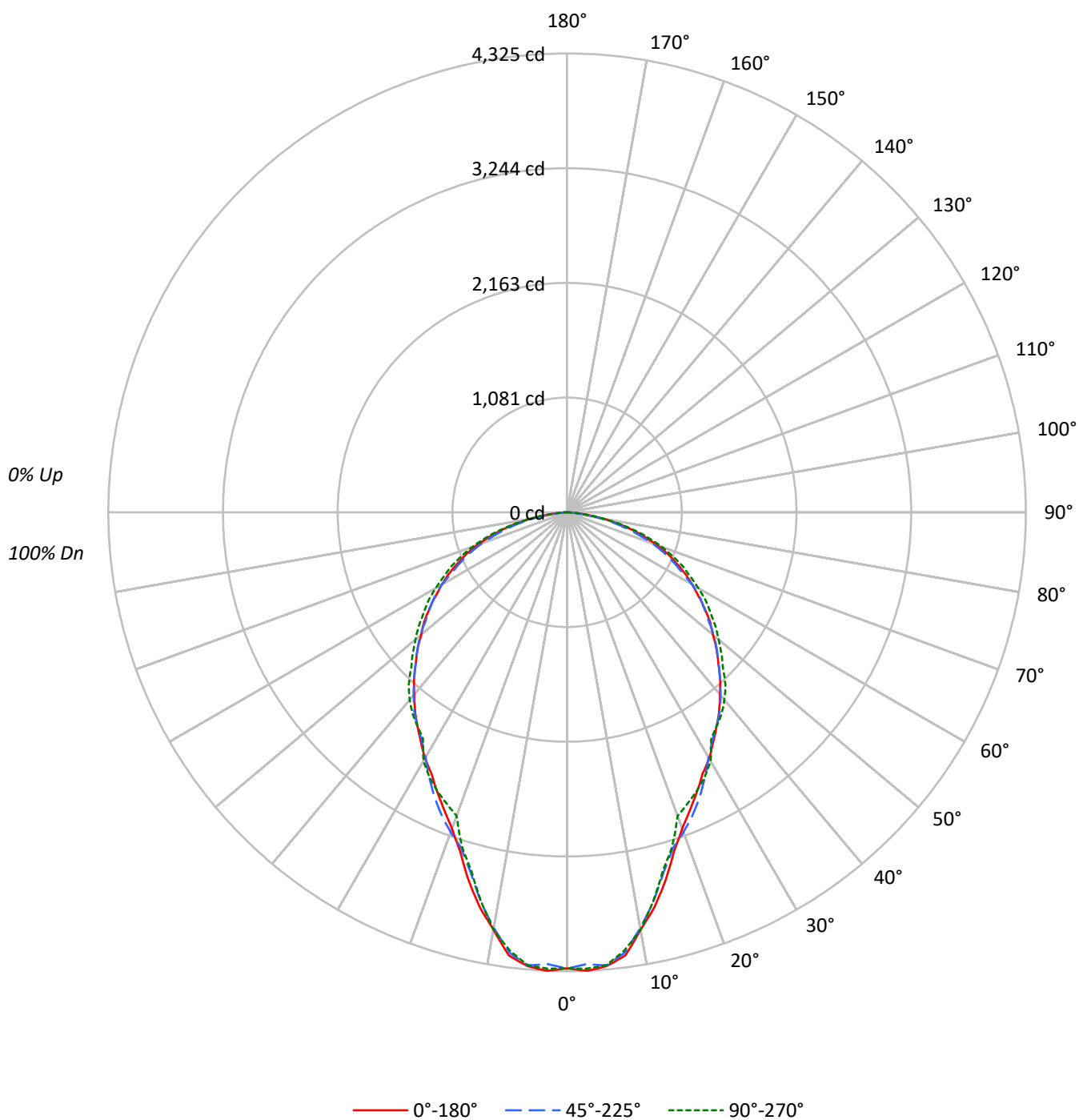
Lumens per Lamp: N/A
Luminaire Lumens: 9192.3 lumens
Efficiency: N/A
Efficacy: 92.0 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	5783	5783	5783
5°	5799	5790	5784
10°	5457	5433	5454
15°	5000	4891	4863
20°	4541	4593	4359
25°	4307	4393	4301
30°	4160	4143	4205
35°	4039	4039	4039
40°	3938	3953	4052
45°	3841	3836	3955
50°	3757	3785	3902
55°	3717	3702	3870
60°	3669	3663	3849
65°	3622	3508	3828
70°	3552	3350	3728
75°	3289	2975	3451
80°	2667	2424	2737
85°	1690	1518	1484



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	399.2	4.3
10°-20°	998.1	10.9
20°-30°	1347.9	14.7
30°-40°	1543.5	16.8
40°-50°	1581.0	17.2
50°-60°	1434.6	15.6
60°-70°	1119.7	12.2
70°-80°	635.0	6.9
80°-90°	133.3	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°	2745.1	29.9
0°-40°	4288.7	46.7
0°-60°	7304.3	79.5
0°-90°	9192.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9192.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4298	4298	4298	4298	4298	
5°	4294	4245	4287	4296	4283	401
15°	3590	3601	3512	3529	3491	1003
25°	2901	2939	2959	2888	2897	1339
35°	2459	2463	2459	2461	2459	1540
45°	2018	2034	2016	2099	2079	1561
55°	1585	1582	1578	1634	1650	1416
65°	1138	1113	1102	1153	1202	1128
75°	633	586	572	606	664	662
85°	110	98	98	92	96	145
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4298.2	4298.2	4298.2	4298.2	4298.2
2.5°	4325.1	4291.5	4262.5	4309.4	4304.9
5°	4293.8	4244.6	4287.1	4296.0	4282.6
7.5°	4211.1	4179.8	4182.0	4164.1	4161.9
10°	3994.3	4012.1	3976.4	4007.7	3992.0
12.5°	3808.7	3819.9	3757.3	3770.7	3752.9
15°	3589.7	3600.9	3511.5	3529.3	3491.3
17.5°	3350.5	3390.8	3317.0	3339.4	3299.1
20°	3171.7	3205.2	3207.5	3171.7	3044.3
22.5°	3030.9	3064.4	3091.2	2984.0	2970.5
25°	2901.3	2939.3	2959.4	2887.8	2896.8
27.5°	2771.6	2814.1	2814.1	2829.7	2809.6
30°	2677.7	2695.6	2666.6	2724.7	2706.8
32.5°	2566.0	2572.7	2548.1	2590.6	2528.0
35°	2458.7	2463.2	2458.7	2460.9	2458.7
37.5°	2355.9	2344.7	2364.8	2351.4	2393.9
40°	2241.9	2241.9	2250.8	2273.2	2306.7
42.5°	2136.8	2145.8	2134.6	2197.2	2210.6
45°	2018.4	2034.0	2016.1	2098.8	2078.7
47.5°	1911.1	1917.8	1913.3	1969.2	1973.7
50°	1794.8	1803.8	1808.3	1857.4	1864.1
52.5°	1698.7	1696.5	1680.9	1752.4	1763.6
55°	1584.7	1582.5	1578.0	1633.9	1649.6
57.5°	1468.5	1470.7	1481.9	1513.2	1551.2
60°	1363.5	1352.3	1361.2	1399.2	1430.5
62.5°	1256.2	1236.1	1215.9	1278.5	1307.6
65°	1137.7	1113.1	1101.9	1153.4	1202.5
67.5°	1028.2	987.9	981.2	1017.0	1075.1
70°	903.0	853.8	851.6	878.4	947.7
72.5°	764.4	722.0	710.8	746.5	809.1
75°	632.6	585.6	572.2	605.7	663.8
77.5°	489.5	451.5	442.6	460.4	507.4
80°	344.2	321.9	312.9	319.6	353.2
82.5°	216.8	201.2	196.7	194.5	212.3
85°	109.5	98.3	98.3	91.6	96.1
87.5°	33.5	31.3	29.1	22.4	24.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)