

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: P487049

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-4LO-35-120-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: P487049
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-35-120-EDD
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

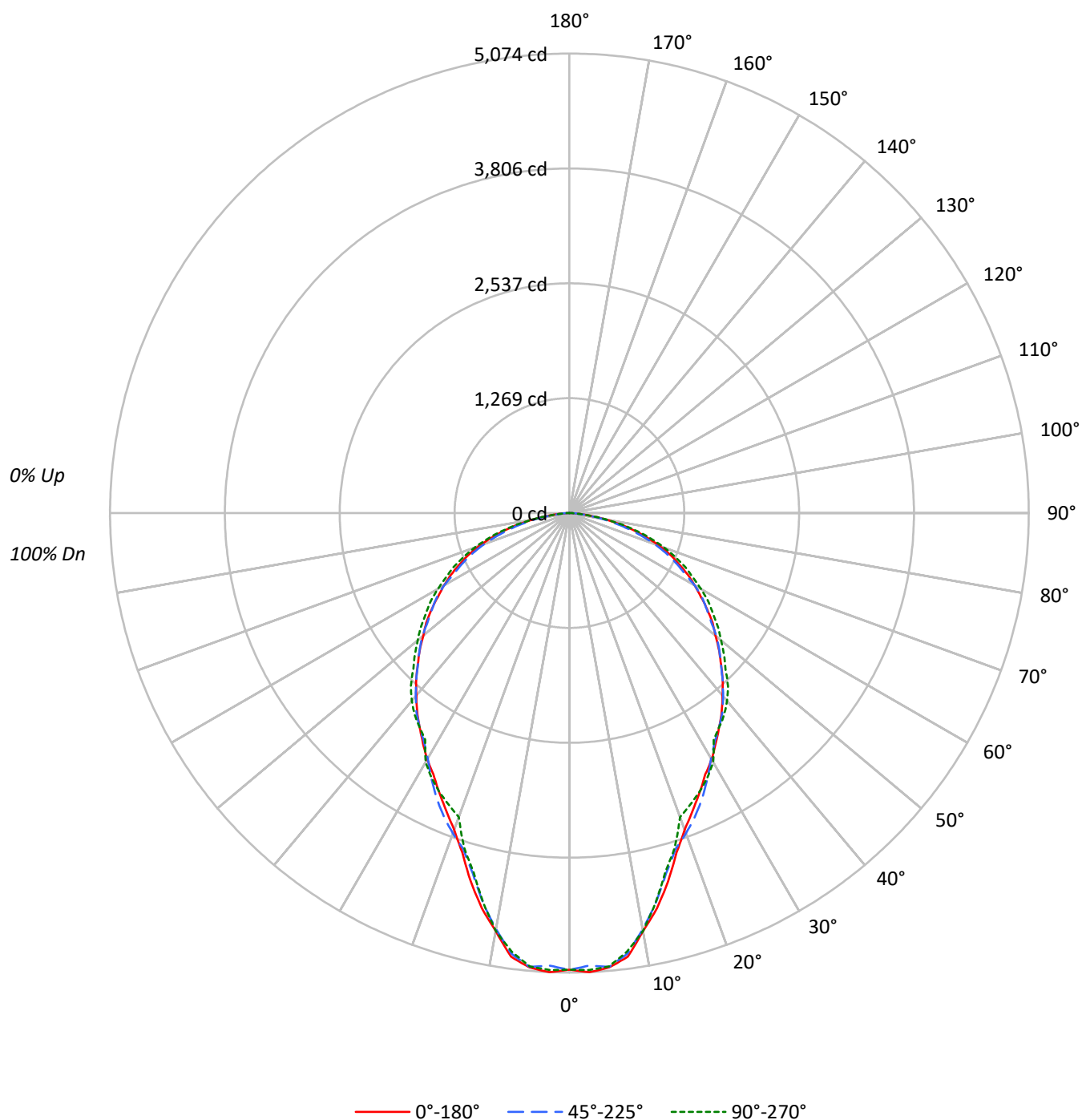
Lumens per Lamp: N/A
Luminaire Lumens: 10784.7 lumens
Efficiency: N/A
Efficacy: 115.2 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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
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°	6785	6785	6785
5°	6804	6793	6786
10°	6403	6374	6399
15°	5866	5739	5706
20°	5328	5388	5114
25°	5053	5154	5046
30°	4881	4861	4934
35°	4738	4738	4738
40°	4620	4638	4753
45°	4506	4501	4641
50°	4408	4441	4578
55°	4362	4343	4540
60°	4305	4297	4516
65°	4250	4116	4492
70°	4168	3930	4374
75°	3858	3490	4049
80°	3129	2844	3210
85°	1984	1782	1741



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	468.4	4.3
10°-20°	1171.0	10.9
20°-30°	1581.4	14.7
30°-40°	1810.9	16.8
40°-50°	1854.9	17.2
50°-60°	1683.1	15.6
60°-70°	1313.6	12.2
70°-80°	745.1	6.9
80°-90°	156.4	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°	3220.7	29.9
0°-40°	5031.6	46.7
0°-60°	8569.6	79.5
0°-90°	10784.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10784.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5043	5043	5043	5043	5043	
5°	5038	4980	5030	5040	5024	471
15°	4212	4225	4120	4141	4096	1177
25°	3404	3448	3472	3388	3399	1571
35°	2885	2890	2885	2887	2885	1807
45°	2368	2386	2365	2462	2439	1831
55°	1859	1857	1851	1917	1935	1662
65°	1335	1306	1293	1353	1411	1323
75°	742	687	671	711	779	776
85°	128	115	115	108	113	170
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5042.8	5042.8	5042.8	5042.8	5042.8
2.5°	5074.3	5035.0	5000.9	5055.9	5050.7
5°	5037.6	4979.9	5029.7	5040.2	5024.5
7.5°	4940.6	4903.9	4906.5	4885.5	4882.9
10°	4686.2	4707.2	4665.2	4701.9	4683.6
12.5°	4468.5	4481.6	4408.2	4424.0	4403.0
15°	4211.5	4224.7	4119.8	4140.7	4096.2
17.5°	3930.9	3978.2	3891.6	3917.8	3870.6
20°	3721.2	3760.5	3763.1	3721.2	3571.7
22.5°	3555.9	3595.3	3626.8	3500.9	3485.1
25°	3403.8	3448.4	3472.0	3388.1	3398.6
27.5°	3251.8	3301.6	3301.6	3319.9	3296.3
30°	3141.6	3162.6	3128.5	3196.7	3175.7
32.5°	3010.5	3018.4	2989.5	3039.3	2965.9
35°	2884.6	2889.9	2884.6	2887.2	2884.6
37.5°	2764.0	2750.9	2774.5	2758.7	2808.6
40°	2630.2	2630.2	2640.7	2667.0	2706.3
42.5°	2507.0	2517.5	2504.4	2577.8	2593.5
45°	2368.0	2386.4	2365.4	2462.4	2438.8
47.5°	2242.1	2250.0	2244.8	2310.3	2315.6
50°	2105.8	2116.3	2121.5	2179.2	2187.1
52.5°	1993.0	1990.4	1972.0	2055.9	2069.1
55°	1859.3	1856.6	1851.4	1917.0	1935.3
57.5°	1722.9	1725.5	1738.6	1775.4	1819.9
60°	1599.7	1586.5	1597.0	1641.6	1678.3
62.5°	1473.8	1450.2	1426.6	1500.0	1534.1
65°	1334.8	1305.9	1292.8	1353.1	1410.8
67.5°	1206.3	1159.1	1151.2	1193.2	1261.4
70°	1059.4	1001.7	999.1	1030.6	1111.9
72.5°	896.9	847.0	833.9	875.9	949.3
75°	742.1	687.1	671.3	710.7	778.8
77.5°	574.3	529.7	519.2	540.2	595.3
80°	403.8	377.6	367.1	375.0	414.3
82.5°	254.4	236.0	230.8	228.1	249.1
85°	128.5	115.4	115.4	107.5	112.8
87.5°	39.3	36.7	34.1	26.2	28.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)