

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: P487048

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-4LO-35-120-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: P487048
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-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

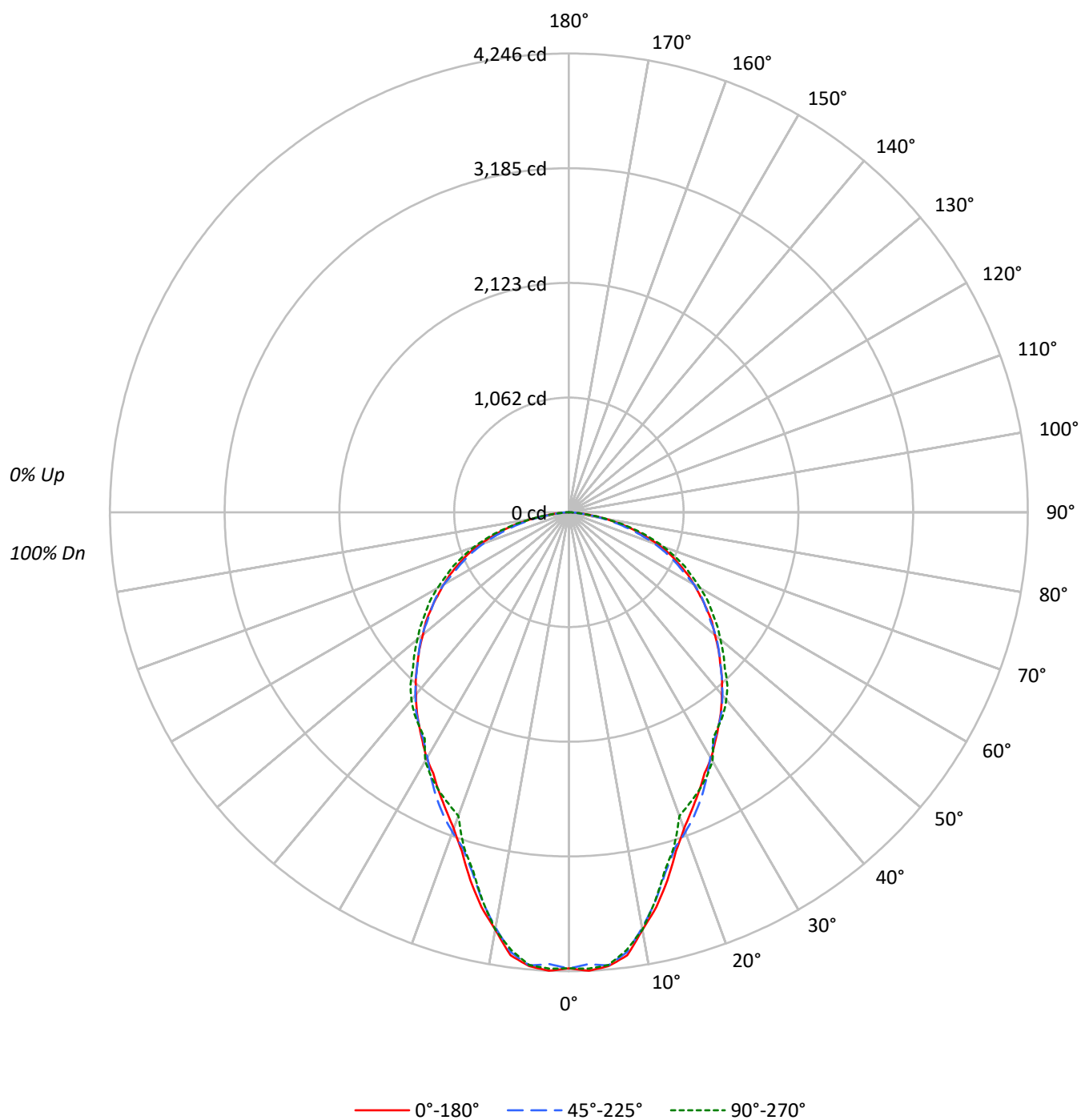
Lumens per Lamp: N/A
Luminaire Lumens: 9024.1 lumens
Efficiency: N/A
Efficacy: 96.4 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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				10			
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°	5677	5677	5677
5°	5693	5684	5678
10°	5357	5333	5354
15°	4909	4802	4774
20°	4458	4509	4279
25°	4228	4313	4222
30°	4084	4067	4128
35°	3965	3965	3965
40°	3866	3881	3977
45°	3770	3766	3883
50°	3688	3716	3831
55°	3649	3634	3799
60°	3602	3596	3779
65°	3556	3444	3758
70°	3487	3289	3660
75°	3228	2920	3388
80°	2618	2380	2686
85°	1660	1490	1457



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	391.9	4.3
10°-20°	979.8	10.9
20°-30°	1323.2	14.7
30°-40°	1515.3	16.8
40°-50°	1552.1	17.2
50°-60°	1408.3	15.6
60°-70°	1099.2	12.2
70°-80°	623.4	6.9
80°-90°	130.8	1.4
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°	2694.9	29.9
0°-40°	4210.2	46.7
0°-60°	7170.6	79.5
0°-90°	9024.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9024.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4220	4220	4220	4220	4220	
5°	4215	4167	4209	4217	4204	394
15°	3524	3535	3447	3465	3428	985
25°	2848	2886	2905	2835	2844	1314
35°	2414	2418	2414	2416	2414	1512
45°	1981	1997	1979	2060	2041	1532
55°	1556	1554	1549	1604	1619	1390
65°	1117	1093	1082	1132	1180	1107
75°	621	575	562	595	652	650
85°	108	96	96	90	94	142
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4219.6	4219.6	4219.6	4219.6	4219.6
2.5°	4245.9	4213.0	4184.5	4230.6	4226.2
5°	4215.2	4166.9	4208.6	4217.4	4204.2
7.5°	4134.0	4103.3	4105.5	4087.9	4085.7
10°	3921.2	3938.7	3903.6	3934.3	3919.0
12.5°	3739.0	3750.0	3688.6	3701.7	3684.2
15°	3524.0	3535.0	3447.2	3464.8	3427.5
17.5°	3289.2	3328.7	3256.3	3278.3	3238.8
20°	3113.7	3146.6	3148.8	3113.7	2988.6
22.5°	2975.4	3008.4	3034.7	2929.4	2916.2
25°	2848.2	2885.5	2905.2	2835.0	2843.8
27.5°	2720.9	2762.6	2762.6	2778.0	2758.2
30°	2628.7	2646.3	2617.8	2674.8	2657.3
32.5°	2519.0	2525.6	2501.5	2543.2	2481.7
35°	2413.7	2418.1	2413.7	2415.9	2413.7
37.5°	2312.8	2301.8	2321.5	2308.4	2350.1
40°	2200.9	2200.9	2209.6	2231.6	2264.5
42.5°	2097.7	2106.5	2095.5	2157.0	2170.1
45°	1981.4	1996.8	1979.2	2060.4	2040.7
47.5°	1876.1	1882.7	1878.3	1933.2	1937.5
50°	1762.0	1770.8	1775.2	1823.4	1830.0
52.5°	1667.7	1665.5	1650.1	1720.3	1731.3
55°	1555.7	1553.5	1549.2	1604.0	1619.4
57.5°	1441.6	1443.8	1454.8	1485.5	1522.8
60°	1338.5	1327.5	1336.3	1373.6	1404.3
62.5°	1233.2	1213.4	1193.7	1255.1	1283.7
65°	1116.9	1092.8	1081.8	1132.2	1180.5
67.5°	1009.4	969.9	963.3	998.4	1055.4
70°	886.5	838.2	836.0	862.4	930.4
72.5°	750.4	708.8	697.8	732.9	794.3
75°	621.0	574.9	561.7	594.6	651.7
77.5°	480.5	443.2	434.5	452.0	498.1
80°	337.9	316.0	307.2	313.8	346.7
82.5°	212.8	197.5	193.1	190.9	208.5
85°	107.5	96.5	96.5	90.0	94.4
87.5°	32.9	30.7	28.5	21.9	24.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)