

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: P487079

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-5LO-20-120-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: P487079
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-20-120-EDD
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

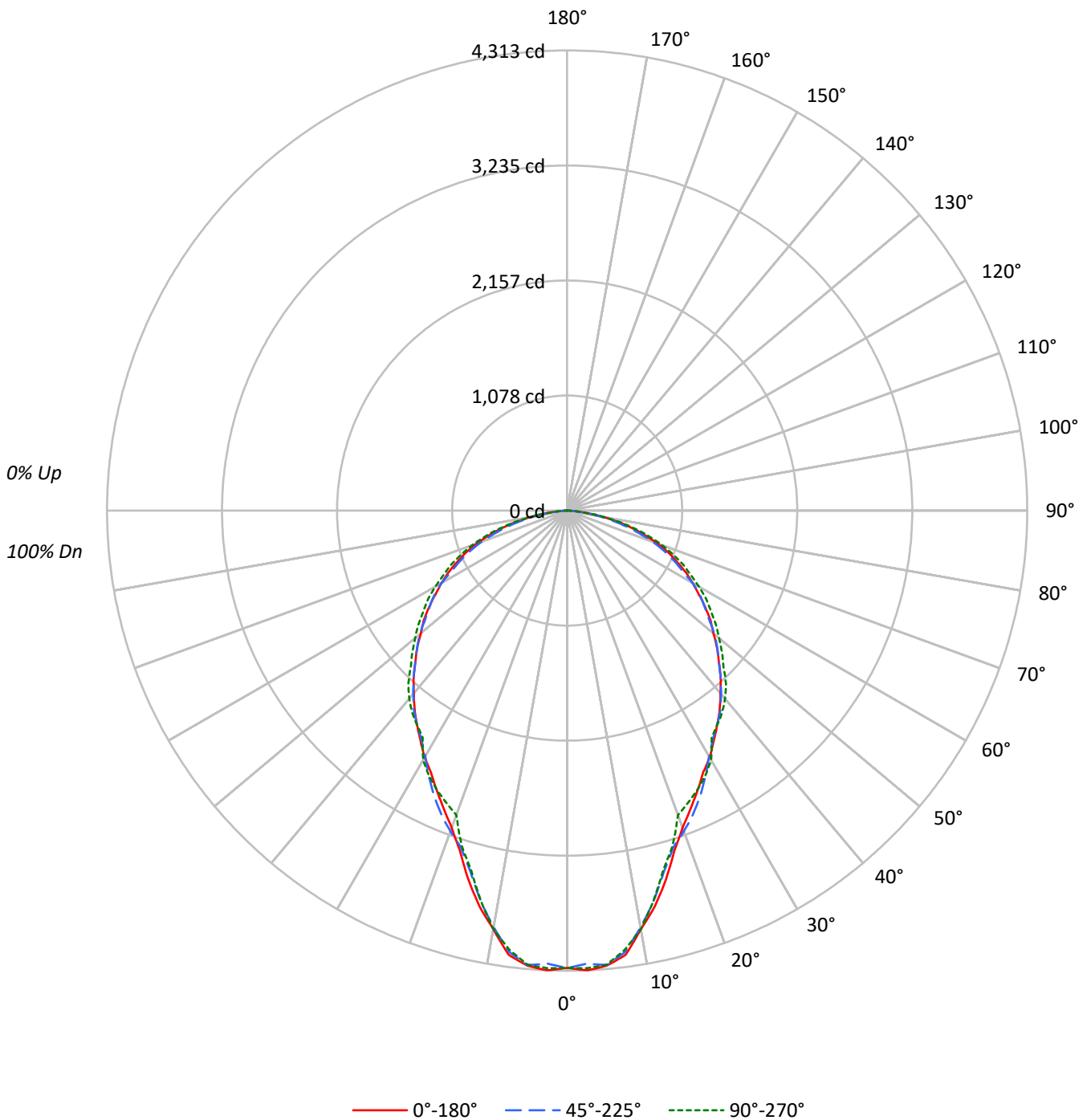
Lumens per Lamp: N/A
Luminaire Lumens: 9167.0 lumens
Efficiency: N/A
Efficacy: 78.4 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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				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°	5767	5767	5767
5°	5783	5774	5768
10°	5442	5418	5439
15°	4986	4878	4850
20°	4529	4580	4347
25°	4295	4381	4289
30°	4149	4131	4194
35°	4027	4027	4027
40°	3927	3942	4040
45°	3830	3826	3945
50°	3747	3775	3891
55°	3707	3692	3859
60°	3659	3653	3839
65°	3612	3499	3818
70°	3543	3341	3718
75°	3279	2966	3441
80°	2660	2418	2729
85°	1686	1514	1479



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	398.1	4.3
10°-20°	995.3	10.9
20°-30°	1344.2	14.7
30°-40°	1539.3	16.8
40°-50°	1576.7	17.2
50°-60°	1430.6	15.6
60°-70°	1116.6	12.2
70°-80°	633.3	6.9
80°-90°	132.9	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°	2737.6	29.9
0°-40°	4276.8	46.7
0°-60°	7284.2	79.5
0°-90°	9167.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9167.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4286	4286	4286	4286	4286	
5°	4282	4233	4275	4284	4271	400
15°	3580	3591	3502	3520	3482	1000
25°	2893	2931	2951	2880	2889	1335
35°	2452	2456	2452	2454	2452	1536
45°	2013	2028	2011	2093	2073	1556
55°	1580	1578	1574	1629	1645	1412
65°	1135	1110	1099	1150	1199	1124
75°	631	584	571	604	662	660
85°	109	98	98	91	96	144
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4286.4	4286.4	4286.4	4286.4	4286.4
2.5°	4313.2	4279.7	4250.7	4297.6	4293.1
5°	4282.0	4232.9	4275.3	4284.2	4270.8
7.5°	4199.5	4168.3	4170.5	4152.7	4150.4
10°	3983.3	4001.1	3965.4	3996.6	3981.0
12.5°	3798.3	3809.4	3747.0	3760.4	3742.5
15°	3579.8	3591.0	3501.8	3519.6	3481.7
17.5°	3341.3	3381.4	3307.9	3330.2	3290.0
20°	3163.0	3196.4	3198.6	3163.0	3035.9
22.5°	3022.6	3056.0	3082.7	2975.7	2962.4
25°	2893.3	2931.2	2951.2	2879.9	2888.8
27.5°	2764.0	2806.3	2806.3	2821.9	2801.9
30°	2670.4	2688.2	2659.2	2717.2	2699.3
32.5°	2558.9	2565.6	2541.1	2583.4	2521.0
35°	2451.9	2456.4	2451.9	2454.2	2451.9
37.5°	2349.4	2338.2	2358.3	2344.9	2387.3
40°	2235.7	2235.7	2244.6	2266.9	2300.4
42.5°	2130.9	2139.9	2128.7	2191.1	2204.5
45°	2012.8	2028.4	2010.6	2093.1	2073.0
47.5°	1905.8	1912.5	1908.0	1963.8	1968.2
50°	1789.9	1798.8	1803.3	1852.3	1859.0
52.5°	1694.1	1691.8	1676.2	1747.6	1758.7
55°	1580.4	1578.1	1573.7	1629.4	1645.0
57.5°	1464.5	1466.7	1477.8	1509.0	1546.9
60°	1359.7	1348.6	1357.5	1395.4	1426.6
62.5°	1252.7	1232.7	1212.6	1275.0	1304.0
65°	1134.6	1110.1	1098.9	1150.2	1199.2
67.5°	1025.4	985.2	978.5	1014.2	1072.2
70°	900.5	851.5	849.3	876.0	945.1
72.5°	762.3	720.0	708.8	744.5	806.9
75°	630.8	584.0	570.6	604.1	662.0
77.5°	488.2	450.3	441.3	459.2	506.0
80°	343.3	321.0	312.1	318.8	352.2
82.5°	216.2	200.6	196.2	193.9	211.8
85°	109.2	98.1	98.1	91.4	95.8
87.5°	33.4	31.2	29.0	22.3	24.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)