

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: P485745

Luminaire Tested: **ORLG-24-2-INS-89BC-LD4-4HI-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: P485745
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-24-2-INS-89BC-LD4-4HI-50-120-EDD
Description: 2X2 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

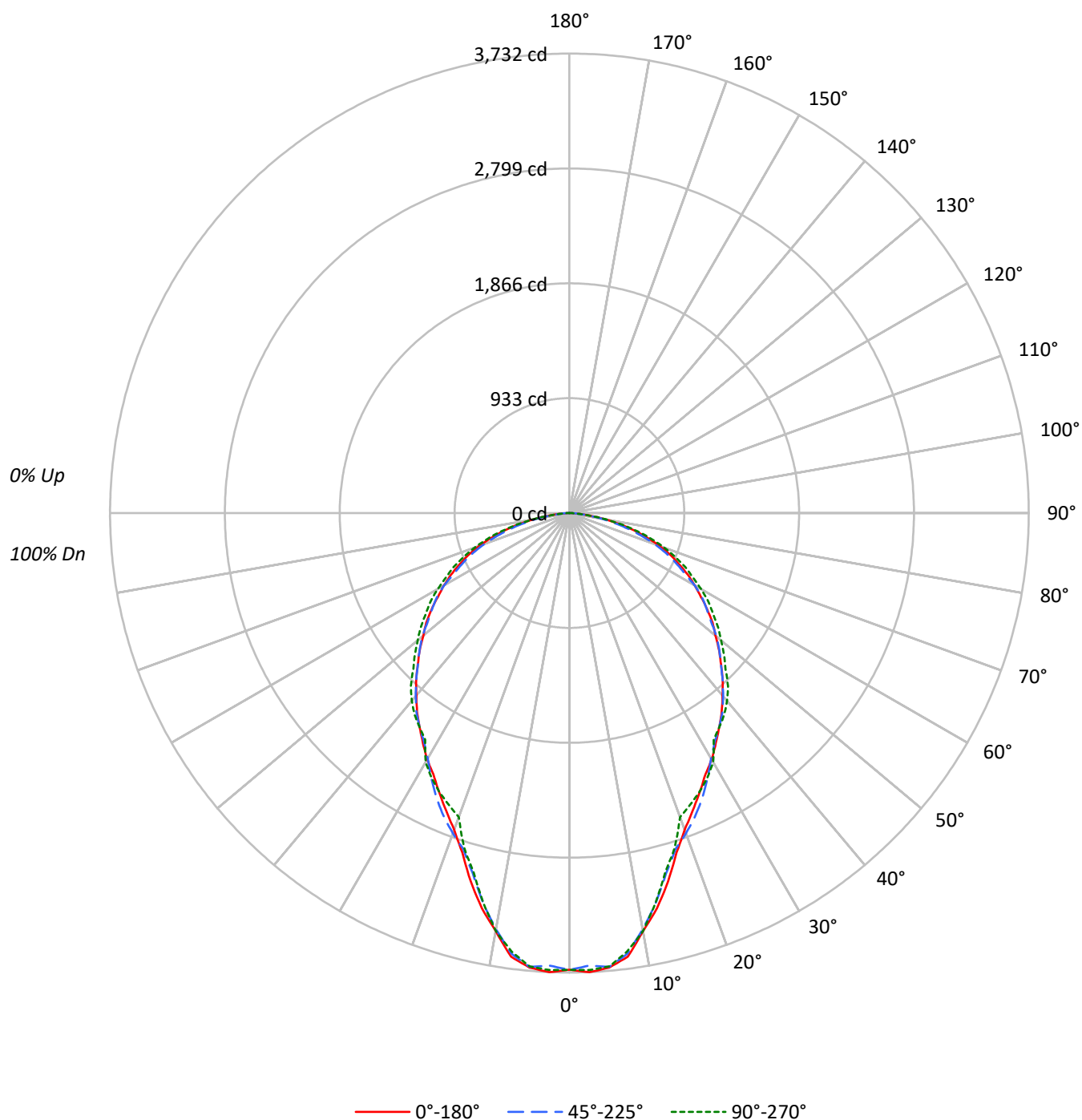
Lumens per Lamp: N/A
Luminaire Lumens: 7932.8 lumens
Efficiency: N/A
Efficacy: 90.1 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 88
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	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°	9982	9982	9982
5°	10010	9994	9983
10°	9419	9377	9414
15°	8630	8442	8394
20°	7838	7927	7523
25°	7434	7583	7423
30°	7180	7150	7258
35°	6970	6970	6970
40°	6796	6823	6993
45°	6629	6621	6827
50°	6484	6533	6735
55°	6416	6389	6678
60°	6332	6322	6644
65°	6252	6055	6608
70°	6131	5782	6435
75°	5676	5134	5957
80°	4604	4184	4723
85°	2918	2621	2560



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	344.5	4.3
10°-20°	861.3	10.9
20°-30°	1163.2	14.7
30°-40°	1332.0	16.8
40°-50°	1364.4	17.2
50°-60°	1238.0	15.6
60°-70°	966.3	12.2
70°-80°	548.0	6.9
80°-90°	115.0	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°	2369.0	29.9
0°-40°	3701.0	46.7
0°-60°	6303.5	79.5
0°-90°	7932.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7932.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3709	3709	3709	3709	3709	
5°	3706	3663	3700	3707	3696	346
15°	3098	3108	3030	3046	3013	866
25°	2504	2536	2554	2492	2500	1155
35°	2122	2126	2122	2124	2122	1329
45°	1742	1755	1740	1811	1794	1347
55°	1368	1366	1362	1410	1424	1222
65°	982	961	951	995	1038	973
75°	546	505	494	523	573	571
85°	94	85	85	79	83	125
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3709.3	3709.3	3709.3	3709.3	3709.3
2.5°	3732.5	3703.5	3678.4	3719.0	3715.1
5°	3705.5	3663.0	3699.7	3707.4	3695.8
7.5°	3634.1	3607.1	3609.0	3593.6	3591.6
10°	3447.0	3462.4	3431.5	3458.6	3445.1
12.5°	3286.9	3296.5	3242.5	3254.1	3238.7
15°	3097.8	3107.5	3030.3	3045.8	3013.0
17.5°	2891.5	2926.2	2862.5	2881.8	2847.1
20°	2737.1	2766.1	2768.0	2737.1	2627.2
22.5°	2615.6	2644.5	2667.7	2575.1	2563.5
25°	2503.7	2536.5	2553.9	2492.2	2499.9
27.5°	2391.9	2428.5	2428.5	2442.0	2424.7
30°	2310.8	2326.3	2301.2	2351.4	2335.9
32.5°	2214.4	2220.2	2199.0	2235.6	2181.6
35°	2121.8	2125.7	2121.8	2123.7	2121.8
37.5°	2033.1	2023.4	2040.8	2029.2	2065.9
40°	1934.7	1934.7	1942.4	1961.7	1990.6
42.5°	1844.0	1851.8	1842.1	1896.1	1907.7
45°	1741.8	1755.3	1739.9	1811.3	1793.9
47.5°	1649.2	1655.0	1651.2	1699.4	1703.2
50°	1548.9	1556.6	1560.5	1602.9	1608.7
52.5°	1466.0	1464.0	1450.5	1512.3	1521.9
55°	1367.6	1365.7	1361.8	1410.0	1423.5
57.5°	1267.3	1269.2	1278.9	1305.9	1338.7
60°	1176.6	1167.0	1174.7	1207.5	1234.5
62.5°	1084.1	1066.7	1049.3	1103.3	1128.4
65°	981.8	960.6	951.0	995.3	1037.8
67.5°	887.3	852.6	846.8	877.7	927.8
70°	779.3	736.8	734.9	758.1	817.9
72.5°	659.7	623.0	613.4	644.3	698.3
75°	545.9	505.4	493.8	522.7	572.9
77.5°	422.4	389.6	381.9	397.4	437.9
80°	297.1	277.8	270.0	275.8	304.8
82.5°	187.1	173.6	169.7	167.8	183.2
85°	94.5	84.9	84.9	79.1	82.9
87.5°	28.9	27.0	25.1	19.3	21.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)