

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: P486931

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-1HI-40-120-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: P486931
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-LD4-1HI-40-120-EDD
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

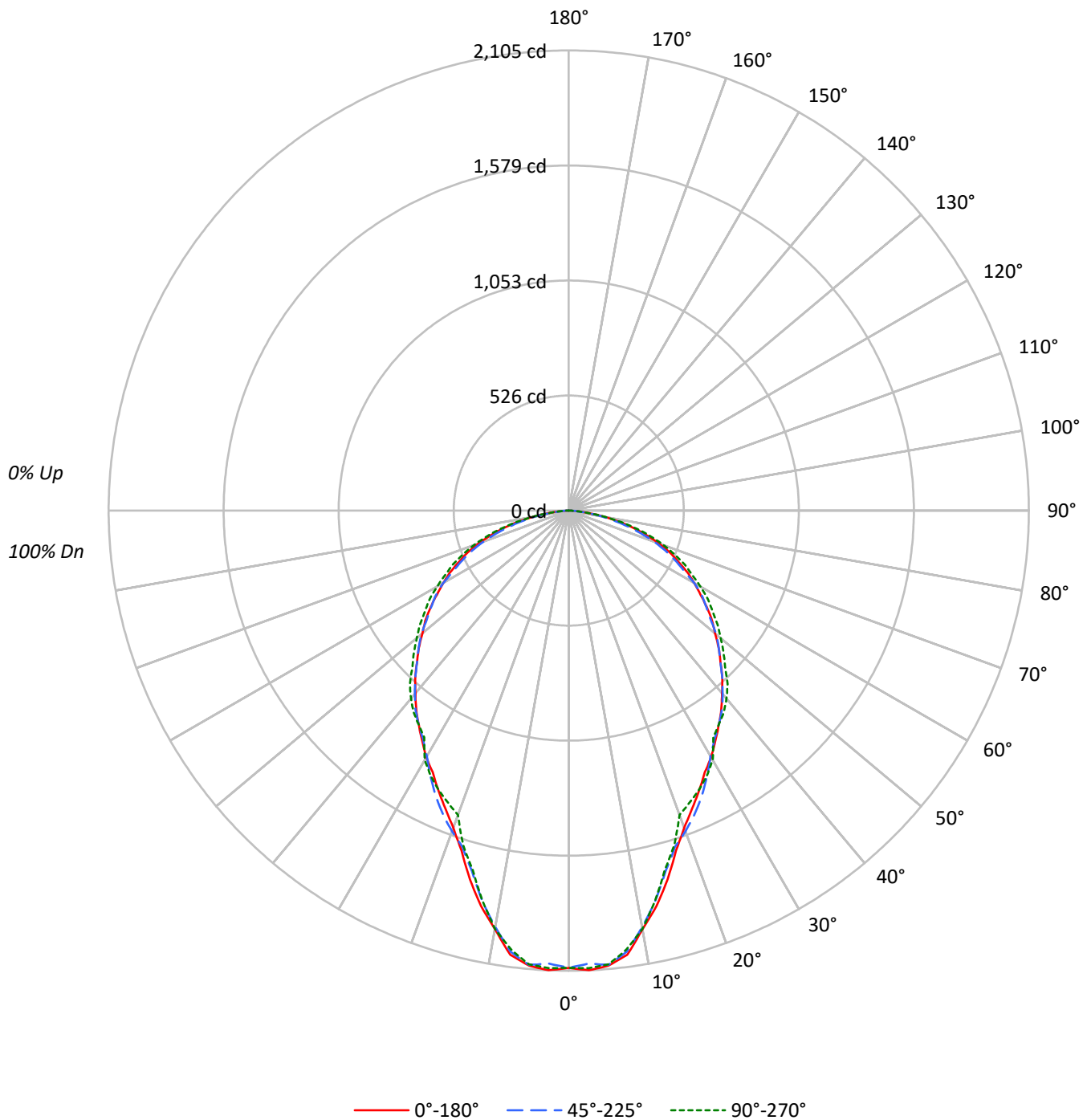
Lumens per Lamp: N/A
Luminaire Lumens: 4473.0 lumens
Efficiency: N/A
Efficacy: 101.7 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 44
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°	2814	2814	2814
5°	2822	2818	2815
10°	2655	2644	2654
15°	2433	2380	2366
20°	2210	2235	2121
25°	2096	2138	2093
30°	2024	2016	2046
35°	1965	1965	1965
40°	1916	1924	1971
45°	1869	1867	1925
50°	1828	1842	1899
55°	1809	1801	1883
60°	1785	1783	1873
65°	1762	1707	1863
70°	1729	1630	1814
75°	1600	1447	1679
80°	1298	1180	1331
85°	823	739	722



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	194.3	4.3
10°-20°	485.7	10.9
20°-30°	655.9	14.7
30°-40°	751.1	16.8
40°-50°	769.3	17.2
50°-60°	698.1	15.6
60°-70°	544.8	12.2
70°-80°	309.0	6.9
80°-90°	64.9	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°	1335.8	29.9
0°-40°	2086.9	46.7
0°-60°	3554.3	79.5
0°-90°	4473.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4473.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2092	2092	2092	2092	2092	
5°	2089	2065	2086	2090	2084	195
15°	1747	1752	1709	1717	1699	488
25°	1412	1430	1440	1405	1410	651
35°	1196	1199	1196	1198	1196	749
45°	982	990	981	1021	1012	759
55°	771	770	768	795	803	689
65°	554	542	536	561	585	549
75°	308	285	278	295	323	322
85°	53	48	48	45	47	70
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2091.5	2091.5	2091.5	2091.5	2091.5
2.5°	2104.6	2088.3	2074.1	2097.0	2094.8
5°	2089.4	2065.4	2086.1	2090.5	2083.9
7.5°	2049.1	2033.9	2035.0	2026.3	2025.2
10°	1943.6	1952.3	1934.9	1950.1	1942.5
12.5°	1853.3	1858.8	1828.3	1834.9	1826.2
15°	1746.8	1752.2	1708.7	1717.4	1698.9
17.5°	1630.4	1650.0	1614.1	1624.9	1605.4
20°	1543.4	1559.7	1560.8	1543.4	1481.4
22.5°	1474.8	1491.2	1504.2	1452.0	1445.5
25°	1411.8	1430.3	1440.0	1405.2	1409.6
27.5°	1348.7	1369.3	1369.3	1377.0	1367.2
30°	1303.0	1311.7	1297.6	1325.8	1317.1
32.5°	1248.6	1251.9	1239.9	1260.6	1230.1
35°	1196.4	1198.6	1196.4	1197.5	1196.4
37.5°	1146.4	1140.9	1150.7	1144.2	1164.9
40°	1090.9	1090.9	1095.3	1106.1	1122.4
42.5°	1039.8	1044.1	1038.7	1069.2	1075.7
45°	982.1	989.8	981.1	1021.3	1011.5
47.5°	929.9	933.2	931.0	958.2	960.4
50°	873.4	877.7	879.9	903.8	907.1
52.5°	826.6	825.5	817.9	852.7	858.2
55°	771.1	770.1	767.9	795.1	802.7
57.5°	714.6	715.7	721.1	736.3	754.8
60°	663.5	658.0	662.4	680.9	696.1
62.5°	611.3	601.5	591.7	622.1	636.3
65°	553.6	541.6	536.2	561.2	585.2
67.5°	500.3	480.7	477.5	494.9	523.2
70°	439.4	415.5	414.4	427.4	461.2
72.5°	372.0	351.3	345.9	363.3	393.7
75°	307.8	285.0	278.4	294.8	323.0
77.5°	238.2	219.7	215.4	224.1	246.9
80°	167.5	156.6	152.3	155.5	171.8
82.5°	105.5	97.9	95.7	94.6	103.3
85°	53.3	47.9	47.9	44.6	46.8
87.5°	16.3	15.2	14.1	10.9	12.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)