

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: P487028

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-3STD-50-120-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: P487028
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-LD4-3STD-50-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

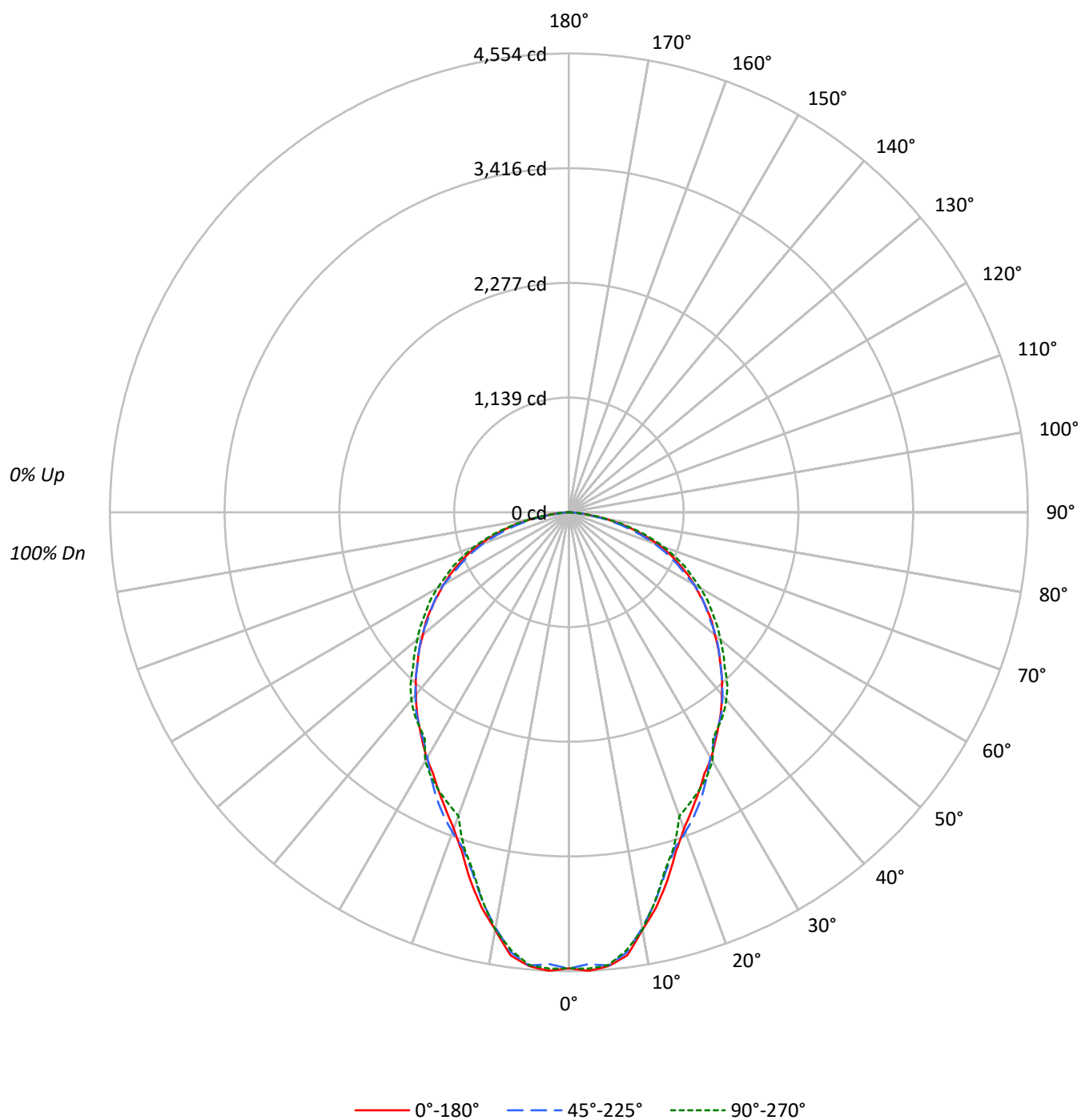
Lumens per Lamp: N/A
Luminaire Lumens: 9679.4 lumens
Efficiency: N/A
Efficacy: 96.9 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	6090	6090	6090
5°	6107	6097	6091
10°	5746	5721	5743
15°	5265	5150	5121
20°	4782	4836	4590
25°	4535	4626	4528
30°	4381	4362	4428
35°	4253	4253	4253
40°	4146	4163	4266
45°	4044	4040	4165
50°	3956	3986	4109
55°	3914	3898	4075
60°	3863	3857	4053
65°	3814	3694	4031
70°	3741	3528	3926
75°	3463	3132	3634
80°	2809	2553	2882
85°	1780	1599	1562



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	420.4	4.3
10°-20°	1050.9	10.9
20°-30°	1419.3	14.7
30°-40°	1625.3	16.8
40°-50°	1664.8	17.2
50°-60°	1510.6	15.6
60°-70°	1179.0	12.2
70°-80°	668.7	6.9
80°-90°	140.4	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°	2890.6	29.9
0°-40°	4515.9	46.7
0°-60°	7691.3	79.5
0°-90°	9679.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9679.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4526	4526	4526	4526	4526	
5°	4521	4470	4514	4524	4510	422
15°	3780	3792	3698	3716	3676	1056
25°	3055	3095	3116	3041	3050	1410
35°	2589	2594	2589	2591	2589	1622
45°	2125	2142	2123	2210	2189	1643
55°	1669	1666	1662	1720	1737	1491
65°	1198	1172	1160	1214	1266	1187
75°	666	617	602	638	699	697
85°	115	104	104	96	101	152
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4526.0	4526.0	4526.0	4526.0	4526.0
2.5°	4554.3	4518.9	4488.3	4537.8	4533.1
5°	4521.3	4469.5	4514.2	4523.7	4509.5
7.5°	4434.2	4401.3	4403.6	4384.8	4382.4
10°	4205.9	4224.7	4187.1	4220.0	4203.6
12.5°	4010.6	4022.3	3956.4	3970.6	3951.7
15°	3779.9	3791.7	3697.5	3716.4	3676.4
17.5°	3528.1	3570.4	3492.8	3516.3	3473.9
20°	3339.8	3375.1	3377.4	3339.8	3205.6
22.5°	3191.5	3226.8	3255.1	3142.1	3128.0
25°	3055.0	3095.0	3116.2	3040.9	3050.3
27.5°	2918.5	2963.2	2963.2	2979.7	2958.5
30°	2819.6	2838.5	2807.9	2869.1	2850.2
32.5°	2702.0	2709.0	2683.1	2727.8	2661.9
35°	2589.0	2593.7	2589.0	2591.3	2589.0
37.5°	2480.7	2468.9	2490.1	2476.0	2520.7
40°	2360.7	2360.7	2370.1	2393.6	2428.9
42.5°	2250.1	2259.5	2247.7	2313.6	2327.7
45°	2125.3	2141.8	2123.0	2210.0	2188.9
47.5°	2012.3	2019.4	2014.7	2073.5	2078.2
50°	1890.0	1899.4	1904.1	1955.9	1962.9
52.5°	1788.7	1786.4	1769.9	1845.2	1857.0
55°	1668.7	1666.4	1661.7	1720.5	1737.0
57.5°	1546.3	1548.7	1560.4	1593.4	1633.4
60°	1435.7	1423.9	1433.4	1473.4	1506.3
62.5°	1322.7	1301.6	1280.4	1346.3	1376.9
65°	1198.0	1172.1	1160.3	1214.5	1266.2
67.5°	1082.7	1040.3	1033.2	1070.9	1132.1
70°	950.9	899.1	896.7	925.0	997.9
72.5°	804.9	760.2	748.5	786.1	852.0
75°	666.1	616.6	602.5	637.8	699.0
77.5°	515.4	475.4	466.0	484.8	534.3
80°	362.5	338.9	329.5	336.6	371.9
82.5°	228.3	211.8	207.1	204.8	223.6
85°	115.3	103.6	103.6	96.5	101.2
87.5°	35.3	33.0	30.6	23.5	25.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)