

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: P487078

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-5LO-20-120-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: P487078
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-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

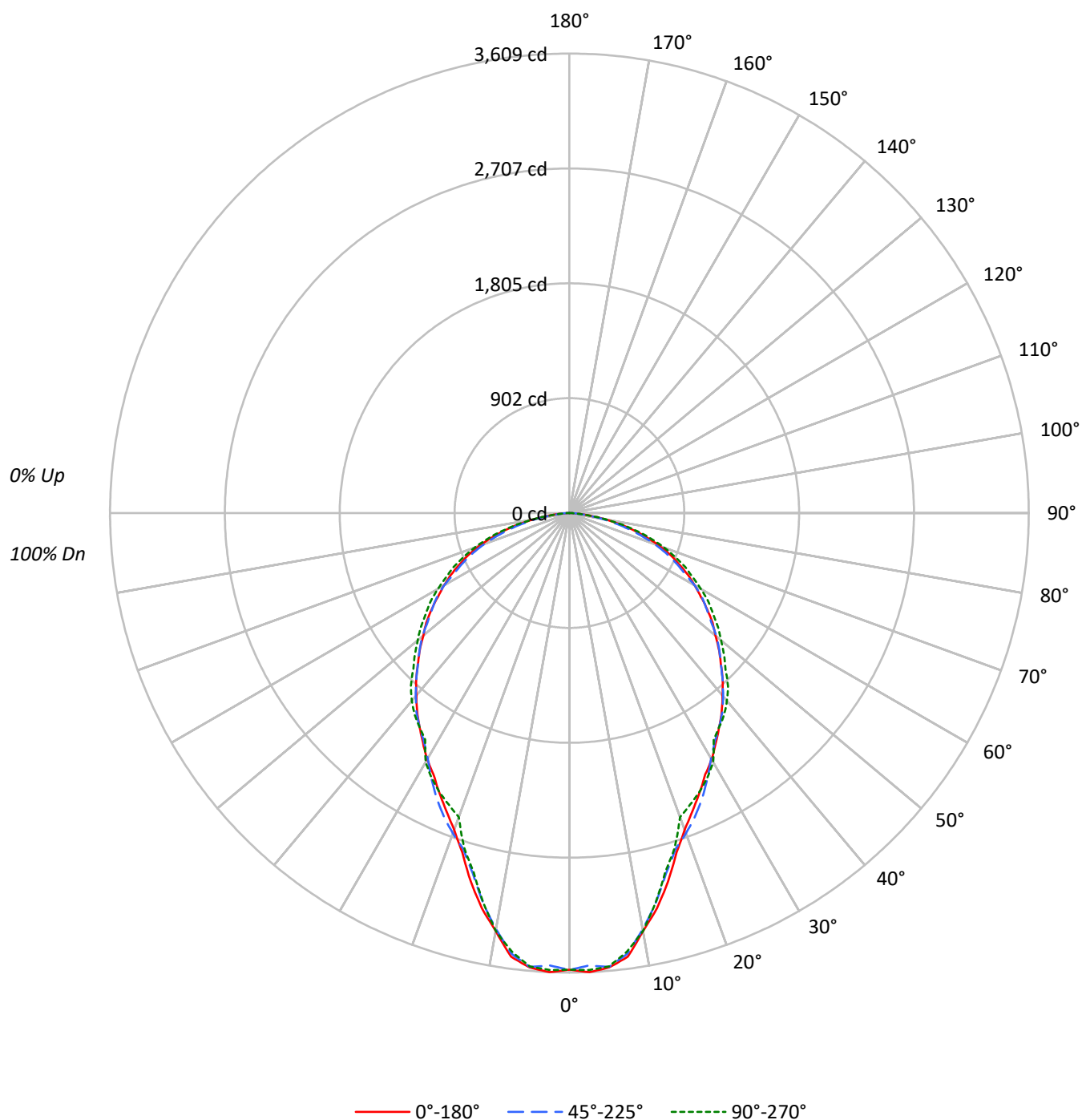
Lumens per Lamp: N/A
Luminaire Lumens: 7670.5 lumens
Efficiency: N/A
Efficacy: 65.6 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	4826	4826	4826
5°	4839	4832	4827
10°	4554	4533	4551
15°	4172	4081	4058
20°	3790	3832	3637
25°	3594	3666	3589
30°	3471	3457	3509
35°	3370	3370	3370
40°	3286	3299	3381
45°	3205	3201	3301
50°	3135	3158	3256
55°	3102	3089	3229
60°	3062	3057	3212
65°	3023	2927	3195
70°	2964	2795	3111
75°	2744	2482	2879
80°	2225	2023	2283
85°	1411	1267	1238



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	333.1	4.3
10°-20°	832.8	10.9
20°-30°	1124.7	14.7
30°-40°	1288.0	16.8
40°-50°	1319.3	17.2
50°-60°	1197.1	15.6
60°-70°	934.3	12.2
70°-80°	529.9	6.9
80°-90°	111.2	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°	2290.7	29.9
0°-40°	3578.7	46.7
0°-60°	6095.1	79.5
0°-90°	7670.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7670.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3587	3587	3587	3587	3587	
5°	3583	3542	3577	3585	3574	335
15°	2995	3005	2930	2945	2913	837
25°	2421	2453	2469	2410	2417	1117
35°	2052	2055	2052	2054	2052	1285
45°	1684	1697	1682	1751	1735	1302
55°	1322	1320	1317	1363	1376	1182
65°	949	929	920	962	1003	941
75°	528	489	478	506	554	552
85°	91	82	82	76	80	121
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3586.7	3586.7	3586.7	3586.7	3586.7
2.5°	3609.0	3581.1	3556.8	3596.0	3592.3
5°	3582.9	3541.9	3577.3	3584.8	3573.6
7.5°	3513.9	3487.8	3489.7	3474.8	3472.9
10°	3333.0	3347.9	3318.1	3344.2	3331.1
12.5°	3178.2	3187.5	3135.3	3146.5	3131.6
15°	2995.4	3004.7	2930.1	2945.1	2913.3
17.5°	2795.8	2829.4	2767.9	2786.5	2752.9
20°	2646.6	2674.6	2676.5	2646.6	2540.3
22.5°	2529.1	2557.1	2579.5	2490.0	2478.8
25°	2421.0	2452.7	2469.4	2409.8	2417.2
27.5°	2312.8	2348.2	2348.2	2361.3	2344.5
30°	2234.4	2249.4	2225.1	2273.6	2258.7
32.5°	2141.2	2146.8	2126.3	2161.7	2109.5
35°	2051.7	2055.4	2051.7	2053.5	2051.7
37.5°	1965.9	1956.5	1973.3	1962.1	1997.6
40°	1870.7	1870.7	1878.2	1896.8	1924.8
42.5°	1783.1	1790.5	1781.2	1833.4	1844.6
45°	1684.2	1697.3	1682.4	1751.4	1734.6
47.5°	1594.7	1600.3	1596.6	1643.2	1646.9
50°	1497.7	1505.2	1508.9	1549.9	1555.5
52.5°	1417.5	1415.6	1402.6	1462.3	1471.6
55°	1322.4	1320.5	1316.8	1363.4	1376.5
57.5°	1225.4	1227.3	1236.6	1262.7	1294.4
60°	1137.7	1128.4	1135.9	1167.6	1193.7
62.5°	1048.2	1031.4	1014.6	1066.9	1091.1
65°	949.4	928.8	919.5	962.4	1003.4
67.5°	858.0	824.4	818.8	848.6	897.1
70°	753.5	712.5	710.6	733.0	790.8
72.5°	637.9	602.4	593.1	623.0	675.2
75°	527.8	488.7	477.5	505.5	553.9
77.5°	408.5	376.8	369.3	384.2	423.4
80°	287.2	268.6	261.1	266.7	294.7
82.5°	180.9	167.9	164.1	162.3	177.2
85°	91.4	82.1	82.1	76.5	80.2
87.5°	28.0	26.1	24.2	18.7	20.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)