

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: P487022

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-3STD-30-120-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: P487022
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-30-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

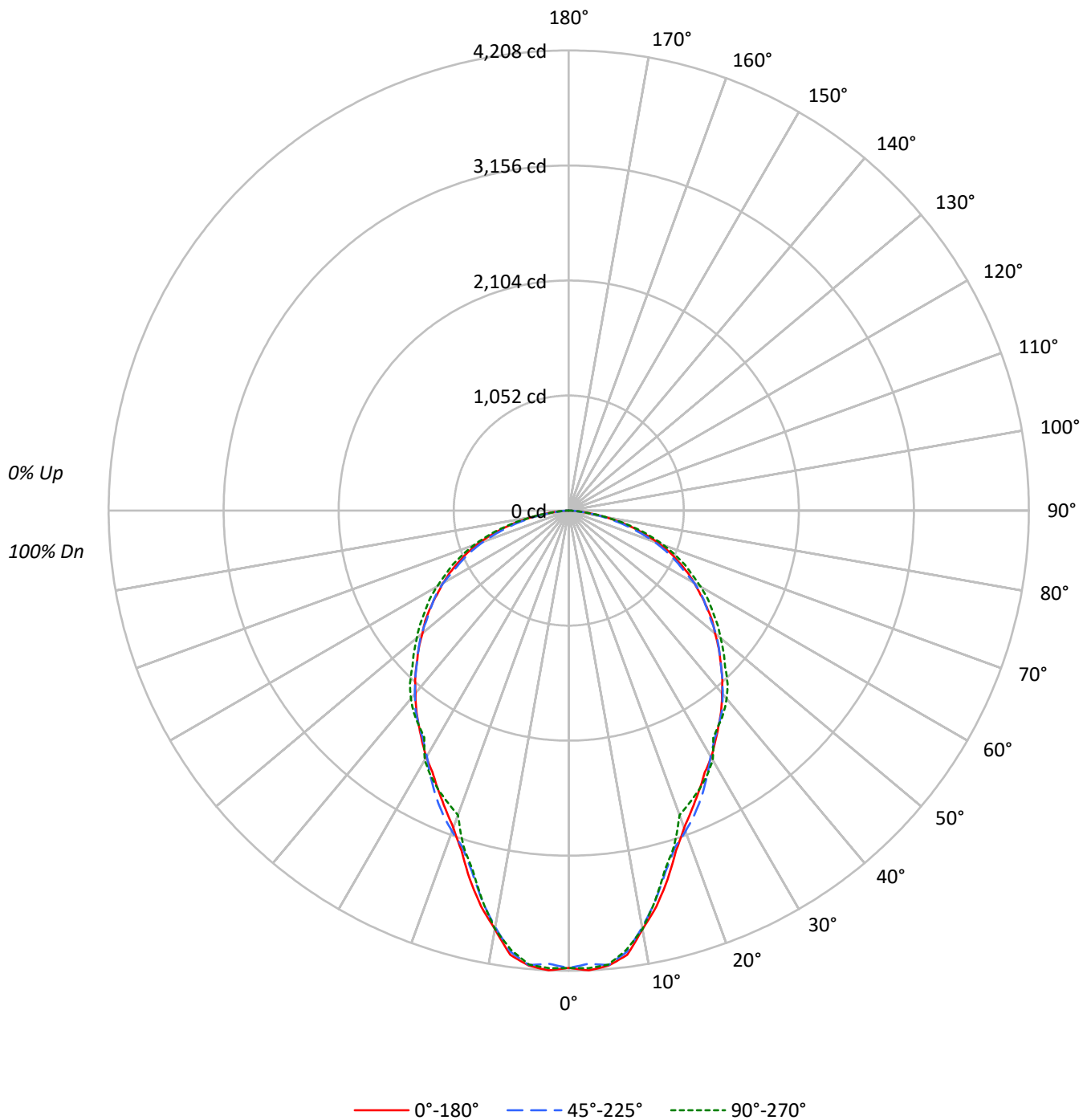
Lumens per Lamp: N/A
Luminaire Lumens: 8944.1 lumens
Efficiency: N/A
Efficacy: 89.5 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	5627	5627	5627
5°	5643	5634	5628
10°	5310	5286	5307
15°	4865	4759	4732
20°	4419	4469	4241
25°	4191	4275	4184
30°	4048	4031	4092
35°	3929	3929	3929
40°	3831	3847	3942
45°	3737	3733	3849
50°	3656	3683	3797
55°	3617	3602	3765
60°	3570	3564	3746
65°	3524	3414	3725
70°	3456	3260	3627
75°	3200	2895	3358
80°	2595	2359	2662
85°	1646	1477	1443



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	388.4	4.3
10°-20°	971.1	10.9
20°-30°	1311.5	14.7
30°-40°	1501.8	16.8
40°-50°	1538.4	17.2
50°-60°	1395.9	15.6
60°-70°	1089.4	12.2
70°-80°	617.9	6.9
80°-90°	129.7	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°	2671.0	29.9
0°-40°	4172.9	46.7
0°-60°	7107.1	79.5
0°-90°	8944.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8944.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4182	4182	4182	4182	4182	
5°	4178	4130	4171	4180	4167	390
15°	3493	3504	3417	3434	3397	976
25°	2823	2860	2880	2810	2819	1303
35°	2392	2397	2392	2394	2392	1499
45°	1964	1979	1962	2042	2023	1518
55°	1542	1540	1535	1590	1605	1378
65°	1107	1083	1072	1122	1170	1097
75°	616	570	557	589	646	644
85°	107	96	96	89	94	141
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4182.2	4182.2	4182.2	4182.2	4182.2
2.5°	4208.3	4175.7	4147.4	4193.1	4188.7
5°	4177.8	4130.0	4171.3	4180.0	4167.0
7.5°	4097.4	4066.9	4069.1	4051.7	4049.5
10°	3886.4	3903.8	3869.0	3899.5	3884.2
12.5°	3705.9	3716.8	3655.9	3668.9	3651.5
15°	3492.8	3503.6	3416.6	3434.0	3397.1
17.5°	3260.1	3299.2	3227.4	3249.2	3210.0
20°	3086.1	3118.7	3120.9	3086.1	2962.1
22.5°	2949.1	2981.7	3007.8	2903.4	2890.3
25°	2822.9	2859.9	2879.5	2809.9	2818.6
27.5°	2696.8	2738.1	2738.1	2753.3	2733.8
30°	2605.4	2622.8	2594.6	2651.1	2633.7
32.5°	2496.7	2503.2	2479.3	2520.6	2459.7
35°	2392.3	2396.7	2392.3	2394.5	2392.3
37.5°	2292.3	2281.4	2301.0	2287.9	2329.2
40°	2181.3	2181.3	2190.0	2211.8	2244.4
42.5°	2079.1	2087.8	2077.0	2137.9	2150.9
45°	1963.9	1979.1	1961.7	2042.2	2022.6
47.5°	1859.5	1866.0	1861.6	1916.0	1920.4
50°	1746.4	1755.1	1759.4	1807.3	1813.8
52.5°	1652.9	1650.7	1635.5	1705.1	1715.9
55°	1542.0	1539.8	1535.4	1589.8	1605.0
57.5°	1428.9	1431.0	1441.9	1472.4	1509.3
60°	1326.6	1315.8	1324.5	1361.4	1391.9
62.5°	1222.3	1202.7	1183.1	1244.0	1272.3
65°	1107.0	1083.1	1072.2	1122.2	1170.1
67.5°	1000.4	961.3	954.7	989.5	1046.1
70°	878.6	830.8	828.6	854.7	922.1
72.5°	743.8	702.5	691.6	726.4	787.3
75°	615.5	569.8	556.8	589.4	645.9
77.5°	476.3	439.3	430.6	448.0	493.7
80°	334.9	313.2	304.5	311.0	343.6
82.5°	211.0	195.7	191.4	189.2	206.6
85°	106.6	95.7	95.7	89.2	93.5
87.5°	32.6	30.4	28.3	21.7	23.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)