

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: P486967

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-2HI-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: P486967
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-LD4-2HI-40-120-EDD
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

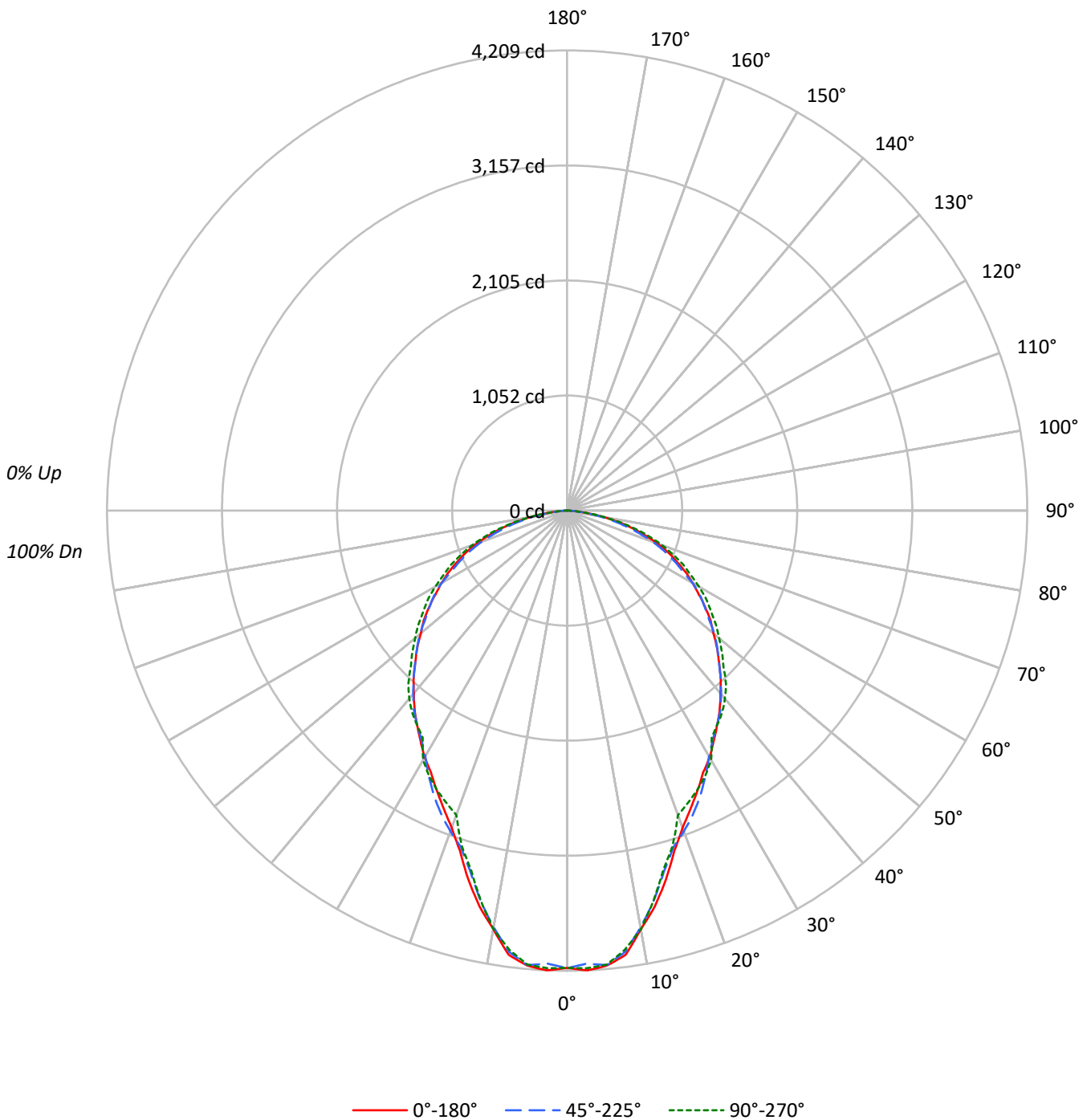
Lumens per Lamp: N/A
Luminaire Lumens: 8946.0 lumens
Efficiency: N/A
Efficacy: 101.7 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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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CATALOG NUMBER: ORLG-24-4-INS-89BC-LD4-2HI-40-120-EDD

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°	5628	5628	5628
5°	5644	5635	5629
10°	5311	5287	5308
15°	4866	4760	4733
20°	4420	4469	4242
25°	4192	4276	4185
30°	4049	4032	4093
35°	3930	3930	3930
40°	3832	3847	3943
45°	3738	3734	3849
50°	3656	3684	3798
55°	3618	3603	3766
60°	3571	3565	3746
65°	3525	3414	3726
70°	3457	3260	3628
75°	3200	2895	3359
80°	2596	2359	2663
85°	1646	1477	1443



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	388.5	4.3
10°-20°	971.3	10.9
20°-30°	1311.8	14.7
30°-40°	1502.2	16.8
40°-50°	1538.7	17.2
50°-60°	1396.1	15.6
60°-70°	1089.7	12.2
70°-80°	618.0	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°	2671.6	29.9
0°-40°	4173.8	46.7
0°-60°	7108.6	79.5
0°-90°	8946.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8946.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4183	4183	4183	4183	4183	
5°	4179	4131	4172	4181	4168	390
15°	3494	3504	3417	3435	3398	976
25°	2824	2860	2880	2810	2819	1303
35°	2393	2397	2393	2395	2393	1499
45°	1964	1980	1962	2043	2023	1519
55°	1542	1540	1536	1590	1605	1378
65°	1107	1083	1072	1122	1170	1097
75°	616	570	557	590	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°	4183.1	4183.1	4183.1	4183.1	4183.1
2.5°	4209.2	4176.6	4148.3	4194.0	4189.6
5°	4178.7	4130.9	4172.2	4180.9	4167.8
7.5°	4098.2	4067.8	4070.0	4052.6	4050.4
10°	3887.2	3904.6	3869.8	3900.3	3885.1
12.5°	3706.7	3717.6	3656.7	3669.7	3652.3
15°	3493.5	3504.4	3417.4	3434.8	3397.8
17.5°	3260.8	3299.9	3228.1	3249.9	3210.7
20°	3086.7	3119.4	3121.5	3086.7	2962.7
22.5°	2949.7	2982.3	3008.4	2904.0	2891.0
25°	2823.5	2860.5	2880.1	2810.5	2819.2
27.5°	2697.4	2738.7	2738.7	2753.9	2734.3
30°	2606.0	2623.4	2595.1	2651.7	2634.3
32.5°	2497.2	2503.8	2479.8	2521.2	2460.2
35°	2392.8	2397.2	2392.8	2395.0	2392.8
37.5°	2292.8	2281.9	2301.5	2288.4	2329.7
40°	2181.8	2181.8	2190.5	2212.3	2244.9
42.5°	2079.6	2088.3	2077.4	2138.3	2151.4
45°	1964.3	1979.5	1962.1	2042.6	2023.0
47.5°	1859.9	1866.4	1862.0	1916.4	1920.8
50°	1746.8	1755.5	1759.8	1807.7	1814.2
52.5°	1653.2	1651.0	1635.8	1705.4	1716.3
55°	1542.3	1540.1	1535.8	1590.1	1605.4
57.5°	1429.2	1431.3	1442.2	1472.7	1509.6
60°	1326.9	1316.0	1324.7	1361.7	1392.2
62.5°	1222.5	1202.9	1183.4	1244.3	1272.5
65°	1107.2	1083.3	1072.4	1122.4	1170.3
67.5°	1000.6	961.5	955.0	989.8	1046.3
70°	878.8	831.0	828.8	854.9	922.3
72.5°	743.9	702.6	691.7	726.5	787.5
75°	615.6	569.9	556.9	589.5	646.1
77.5°	476.4	439.4	430.7	448.1	493.8
80°	335.0	313.2	304.5	311.1	343.7
82.5°	211.0	195.8	191.4	189.2	206.7
85°	106.6	95.7	95.7	89.2	93.5
87.5°	32.6	30.5	28.3	21.8	23.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)