

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: P487005

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-3HI-50-120-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: P487005
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-LD4-3HI-50-120-EDD
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

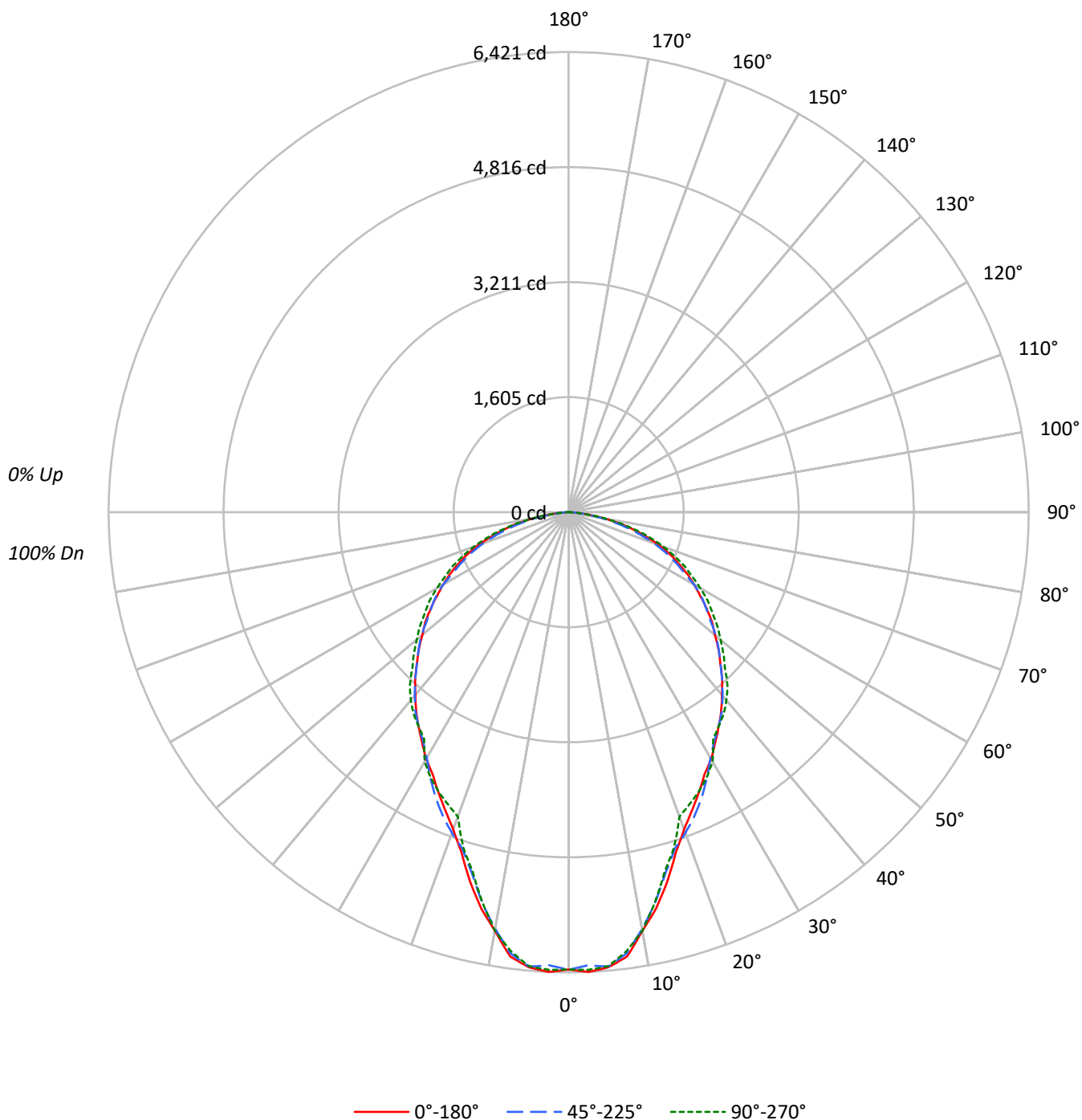
Lumens per Lamp: N/A
Luminaire Lumens: 13646.6 lumens
Efficiency: N/A
Efficacy: 103.4 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 132
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
RCR																					
0	119	119	119	119		116	116	116	116		111	111	111		106	106	106		102	102	102
1	109	104	100	96		106	102	98	95		98	95	92		94	91	89		90	88	86
2	99	91	84	79		97	89	83	78		86	81	76		82	78	74		79	76	73
3	91	80	72	66		88	79	71	65		76	69	64		73	67	63		70	66	62
4	83	71	63	56		81	70	62	56		67	60	55		65	59	54		63	58	53
5	77	64	55	48		75	63	54	48		61	53	48		59	52	47		57	51	47
6	71	58	49	43		69	57	48	42		55	48	42		53	47	42		52	46	41
7	66	53	44	38		64	52	44	38		50	43	37		49	42	37		47	41	37
8	61	48	40	34		60	47	39	34		46	39	34		45	38	33		44	38	33
9	58	44	36	31		56	44	36	31		43	35	30		41	35	30		40	35	30
10	54	41	33	28		53	40	33	28		40	33	28		39	32	28		38	32	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8586	8586	8586
5°	8609	8596	8587
10°	8102	8065	8097
15°	7423	7261	7220
20°	6742	6818	6471
25°	6394	6522	6384
30°	6176	6150	6243
35°	5995	5995	5995
40°	5846	5869	6015
45°	5702	5695	5872
50°	5578	5619	5793
55°	5519	5495	5745
60°	5447	5438	5715
65°	5377	5208	5684
70°	5274	4974	5535
75°	4882	4416	5123
80°	3959	3600	4062
85°	2510	2254	2203



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	592.7	4.3
10°-20°	1481.7	10.9
20°-30°	2001.0	14.7
30°-40°	2291.4	16.8
40°-50°	2347.2	17.2
50°-60°	2129.7	15.6
60°-70°	1662.2	12.2
70°-80°	942.8	6.9
80°-90°	197.9	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°	4075.4	29.9
0°-40°	6366.8	46.7
0°-60°	10843.7	79.5
0°-90°	13646.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13646.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6381	6381	6381	6381	6381	
5°	6374	6301	6364	6378	6358	595
15°	5329	5346	5213	5240	5183	1489
25°	4307	4364	4393	4287	4300	1988
35°	3650	3657	3650	3653	3650	2286
45°	2996	3020	2993	3116	3086	2317
55°	2353	2349	2343	2426	2449	2102
65°	1689	1652	1636	1712	1785	1674
75°	939	869	850	899	986	982
85°	163	146	146	136	143	215
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6381.0	6381.0	6381.0	6381.0	6381.0
2.5°	6420.9	6371.1	6327.9	6397.6	6391.0
5°	6374.4	6301.4	6364.4	6377.7	6357.8
7.5°	6251.6	6205.2	6208.5	6181.9	6178.6
10°	5929.8	5956.3	5903.2	5949.7	5926.4
12.5°	5654.3	5670.9	5578.0	5597.9	5571.4
15°	5329.1	5345.7	5213.0	5239.6	5183.1
17.5°	4974.1	5033.8	4924.3	4957.5	4897.8
20°	4708.6	4758.4	4761.7	4708.6	4519.5
22.5°	4499.6	4549.4	4589.2	4429.9	4410.0
25°	4307.1	4363.5	4393.4	4287.2	4300.5
27.5°	4114.7	4177.7	4177.7	4200.9	4171.1
30°	3975.3	4001.8	3958.7	4045.0	4018.4
32.5°	3809.4	3819.3	3782.8	3845.9	3753.0
35°	3650.1	3656.7	3650.1	3653.4	3650.1
37.5°	3497.5	3480.9	3510.7	3490.8	3553.9
40°	3328.2	3328.2	3341.5	3374.7	3424.5
42.5°	3172.3	3185.5	3169.0	3261.9	3281.8
45°	2996.4	3019.6	2993.1	3115.9	3086.0
47.5°	2837.1	2847.1	2840.4	2923.4	2930.0
50°	2664.6	2677.8	2684.5	2757.5	2767.4
52.5°	2521.9	2518.6	2495.3	2601.5	2618.1
55°	2352.7	2349.3	2342.7	2425.7	2448.9
57.5°	2180.1	2183.4	2200.0	2246.5	2302.9
60°	2024.1	2007.6	2020.8	2077.2	2123.7
62.5°	1864.9	1835.0	1805.1	1898.1	1941.2
65°	1689.0	1652.5	1635.9	1712.2	1785.2
67.5°	1526.4	1466.7	1456.7	1509.8	1596.1
70°	1340.6	1267.6	1264.3	1304.1	1406.9
72.5°	1134.8	1071.8	1055.2	1108.3	1201.2
75°	939.1	869.4	849.5	899.3	985.5
77.5°	726.7	670.3	657.0	683.6	753.2
80°	511.0	477.8	464.6	474.5	524.3
82.5°	321.9	298.6	292.0	288.7	315.2
85°	162.6	146.0	146.0	136.0	142.7
87.5°	49.8	46.5	43.1	33.2	36.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)