

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: P487098

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-5STD-40-120-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: P487098
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-LD4-5STD-40-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

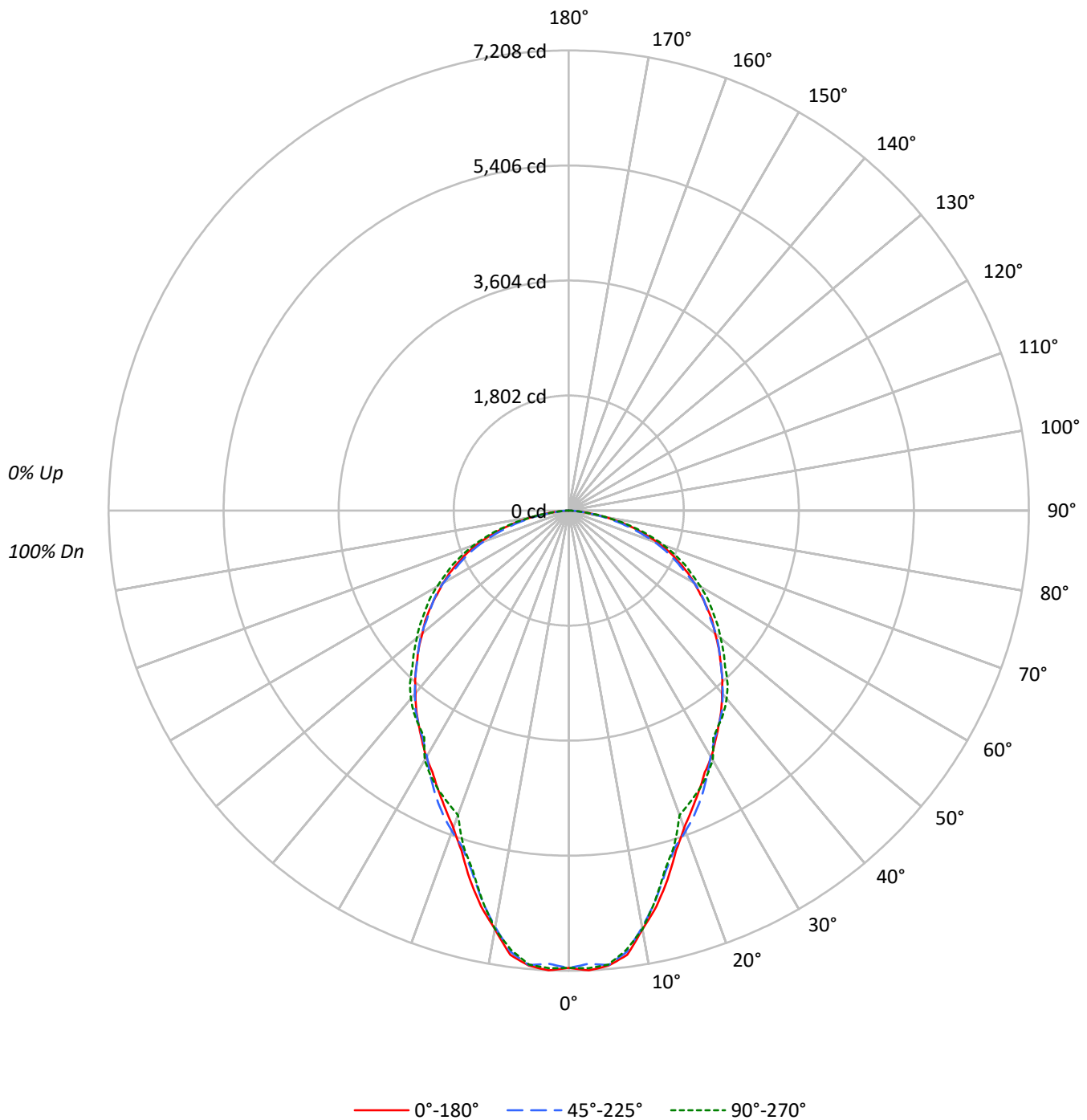
Lumens per Lamp: N/A
Luminaire Lumens: 15320.4 lumens
Efficiency: N/A
Efficacy: 92.0 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 166.5
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					0
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°	9639	9639	9639
5°	9665	9650	9640
10°	9095	9055	9090
15°	8334	8152	8105
20°	7569	7654	7265
25°	7179	7322	7167
30°	6934	6905	7009
35°	6731	6731	6731
40°	6563	6589	6753
45°	6401	6394	6592
50°	6262	6308	6503
55°	6196	6169	6449
60°	6115	6105	6416
65°	6037	5847	6381
70°	5921	5583	6214
75°	5481	4958	5752
80°	4445	4041	4561
85°	2817	2530	2473



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	665.4	4.3
10°-20°	1663.4	10.9
20°-30°	2246.4	14.7
30°-40°	2572.5	16.8
40°-50°	2635.1	17.2
50°-60°	2391.0	15.6
60°-70°	1866.1	12.2
70°-80°	1058.4	6.9
80°-90°	222.2	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°	4575.2	29.9
0°-40°	7147.7	46.7
0°-60°	12173.7	79.5
0°-90°	15320.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15320.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7164	7164	7164	7164	7164	
5°	7156	7074	7145	7160	7138	668
15°	5983	6001	5852	5882	5819	1672
25°	4835	4899	4932	4813	4828	2231
35°	4098	4105	4098	4102	4098	2567
45°	3364	3390	3360	3498	3464	2601
55°	2641	2638	2630	2723	2749	2360
65°	1896	1855	1837	1922	2004	1879
75°	1054	976	954	1010	1106	1103
85°	182	164	164	153	160	241
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7163.7	7163.7	7163.7	7163.7	7163.7
2.5°	7208.4	7152.5	7104.1	7182.3	7174.9
5°	7156.2	7074.3	7145.1	7160.0	7137.6
7.5°	7018.4	6966.3	6970.0	6940.2	6936.5
10°	6657.1	6686.9	6627.3	6679.4	6653.3
12.5°	6347.9	6366.5	6262.2	6284.5	6254.7
15°	5982.8	6001.4	5852.4	5882.2	5818.9
17.5°	5584.2	5651.2	5528.3	5565.6	5498.5
20°	5286.2	5342.0	5345.8	5286.2	5073.8
22.5°	5051.5	5107.3	5152.0	4973.2	4950.9
25°	4835.4	4898.7	4932.3	4813.0	4827.9
27.5°	4619.3	4690.1	4690.1	4716.2	4682.7
30°	4462.9	4492.7	4444.2	4541.1	4511.3
32.5°	4276.6	4287.8	4246.8	4317.6	4213.3
35°	4097.8	4105.2	4097.8	4101.5	4097.8
37.5°	3926.4	3907.8	3941.3	3919.0	3989.8
40°	3736.4	3736.4	3751.3	3788.6	3844.5
42.5°	3561.4	3576.3	3557.6	3661.9	3684.3
45°	3363.9	3390.0	3360.2	3498.0	3464.5
47.5°	3185.1	3196.3	3188.8	3282.0	3289.4
50°	2991.4	3006.3	3013.7	3095.7	3106.9
52.5°	2831.2	2827.5	2801.4	2920.6	2939.2
55°	2641.2	2637.5	2630.0	2723.2	2749.2
57.5°	2447.5	2451.2	2469.9	2522.0	2585.3
60°	2272.4	2253.8	2268.7	2332.0	2384.2
62.5°	2093.6	2060.1	2026.5	2130.9	2179.3
65°	1896.2	1855.2	1836.6	1922.2	2004.2
67.5°	1713.6	1646.6	1635.4	1695.0	1791.9
70°	1505.0	1423.1	1419.3	1464.0	1579.5
72.5°	1274.0	1203.3	1184.6	1244.2	1348.5
75°	1054.3	976.0	953.7	1009.5	1106.4
77.5°	815.8	752.5	737.6	767.4	845.6
80°	573.7	536.4	521.5	532.7	588.6
82.5°	361.4	335.3	327.8	324.1	353.9
85°	182.5	163.9	163.9	152.7	160.2
87.5°	55.9	52.2	48.4	37.3	41.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)