

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: P487070

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-5HI-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: P487070
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-LD4-5HI-30-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

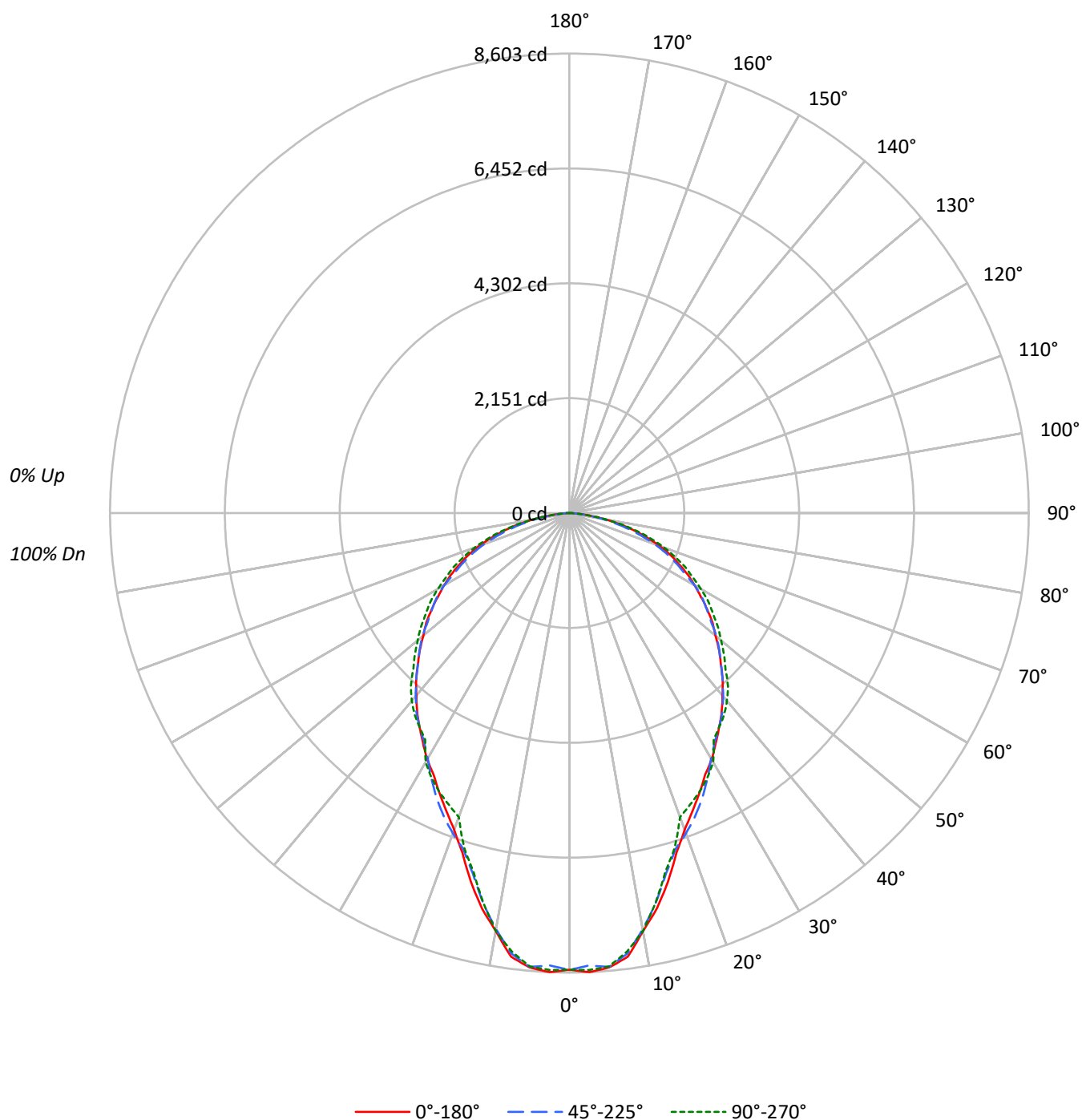
Lumens per Lamp: N/A
Luminaire Lumens: 18284.3 lumens
Efficiency: N/A
Efficacy: 83.1 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 220
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°	11503	11503	11503
5°	11535	11517	11505
10°	10855	10806	10849
15°	9946	9729	9674
20°	9033	9135	8670
25°	8567	8739	8554
30°	8275	8240	8365
35°	8033	8033	8033
40°	7832	7864	8059
45°	7639	7631	7868
50°	7473	7529	7761
55°	7394	7363	7697
60°	7298	7286	7657
65°	7205	6978	7615
70°	7066	6664	7416
75°	6541	5917	6865
80°	5305	4823	5443
85°	3364	3020	2952



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	794.1	4.3
10°-20°	1985.2	10.9
20°-30°	2681.0	14.7
30°-40°	3070.2	16.8
40°-50°	3144.8	17.2
50°-60°	2853.5	15.6
60°-70°	2227.1	12.2
70°-80°	1263.2	6.9
80°-90°	265.1	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°	5460.3	29.9
0°-40°	8530.5	46.7
0°-60°	14528.9	79.5
0°-90°	18284.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18284.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8550	8550	8550	8550	8550	
5°	8541	8443	8527	8545	8518	798
15°	7140	7162	6985	7020	6945	1996
25°	5771	5846	5886	5744	5762	2663
35°	4891	4900	4891	4895	4891	3064
45°	4015	4046	4010	4175	4135	3104
55°	3152	3148	3139	3250	3281	2817
65°	2263	2214	2192	2294	2392	2243
75°	1258	1165	1138	1205	1320	1316
85°	218	196	196	182	191	288
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8549.6	8549.6	8549.6	8549.6	8549.6
2.5°	8602.9	8536.3	8478.5	8571.8	8562.9
5°	8540.7	8442.9	8527.4	8545.1	8518.5
7.5°	8376.2	8314.0	8318.4	8282.8	8278.4
10°	7944.9	7980.5	7909.4	7971.6	7940.5
12.5°	7575.9	7598.2	7473.7	7500.3	7464.8
15°	7140.2	7162.4	6984.6	7020.2	6944.6
17.5°	6664.5	6744.5	6597.8	6642.3	6562.2
20°	6308.8	6375.5	6380.0	6308.8	6055.4
22.5°	6028.7	6095.4	6148.8	5935.4	5908.7
25°	5770.9	5846.4	5886.5	5744.2	5762.0
27.5°	5513.0	5597.5	5597.5	5628.6	5588.6
30°	5326.3	5361.8	5304.0	5419.6	5384.1
32.5°	5104.0	5117.3	5068.4	5152.9	5028.4
35°	4890.6	4899.5	4890.6	4895.0	4890.6
37.5°	4686.0	4663.8	4703.8	4677.2	4761.6
40°	4459.3	4459.3	4477.1	4521.5	4588.2
42.5°	4250.3	4268.1	4245.9	4370.4	4397.1
45°	4014.7	4045.8	4010.3	4174.8	4134.7
47.5°	3801.3	3814.6	3805.7	3916.9	3925.8
50°	3570.1	3587.9	3596.8	3694.6	3707.9
52.5°	3378.9	3374.5	3343.4	3485.6	3507.9
55°	3152.2	3147.7	3138.9	3250.0	3281.1
57.5°	2921.0	2925.4	2947.7	3009.9	3085.5
60°	2712.0	2689.8	2707.6	2783.2	2845.4
62.5°	2498.6	2458.6	2418.6	2543.1	2600.9
65°	2263.0	2214.1	2191.9	2294.1	2391.9
67.5°	2045.1	1965.1	1951.8	2022.9	2138.5
70°	1796.2	1698.4	1693.9	1747.3	1885.1
72.5°	1520.5	1436.0	1413.8	1485.0	1609.4
75°	1258.2	1164.8	1138.2	1204.9	1320.5
77.5°	973.7	898.1	880.3	915.9	1009.2
80°	684.7	640.2	622.4	635.8	702.5
82.5°	431.3	400.1	391.2	386.8	422.4
85°	217.9	195.6	195.6	182.3	191.2
87.5°	66.7	62.2	57.8	44.5	48.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)