

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: P487132

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-6STD-35-120-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: P487132
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-LD4-6STD-35-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

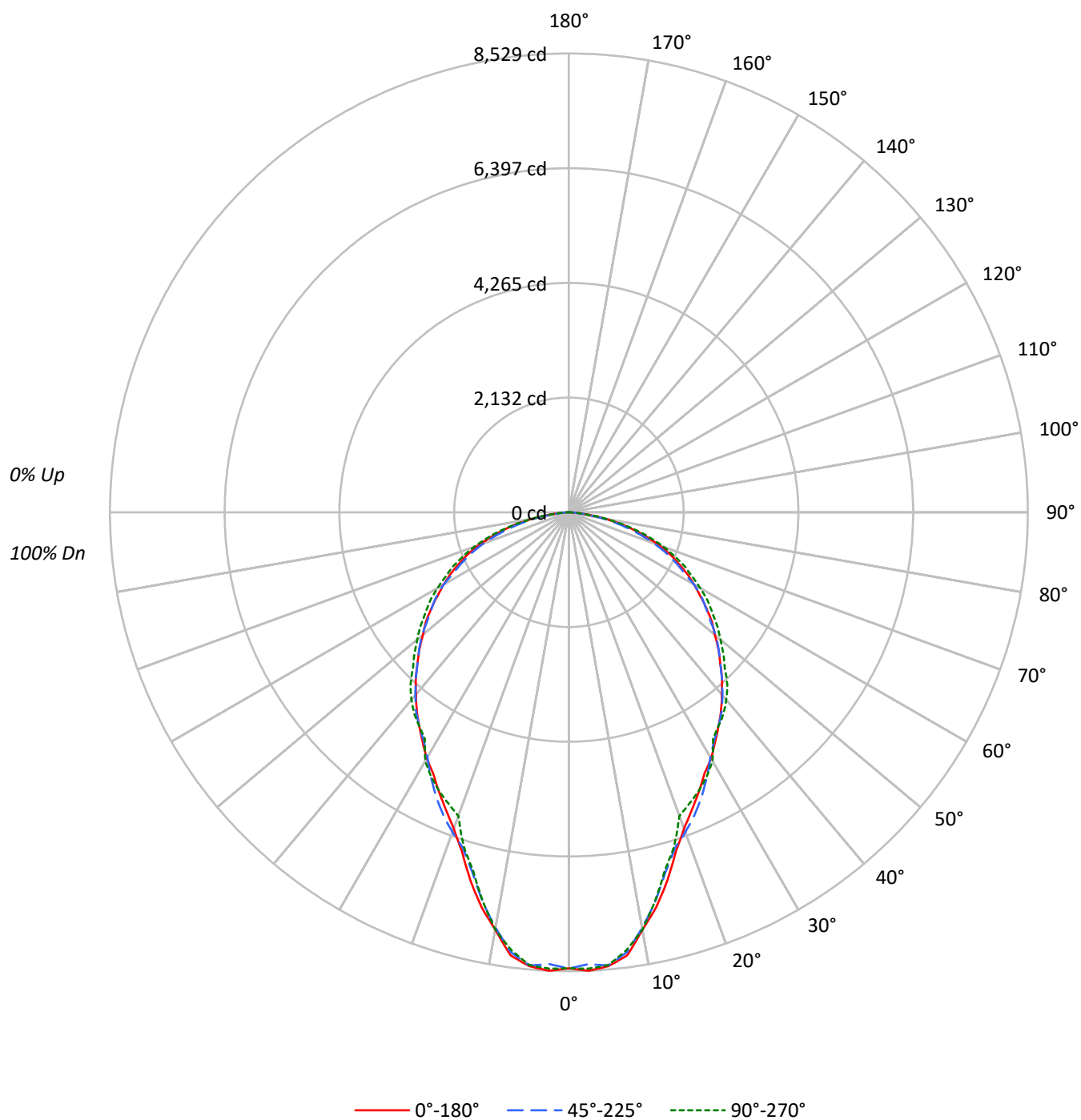
Lumens per Lamp: N/A
Luminaire Lumens: 18127.1 lumens
Efficiency: N/A
Efficacy: 90.7 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 199.8
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°	11405	11405	11405
5°	11436	11418	11406
10°	10761	10713	10755
15°	9860	9646	9590
20°	8956	9057	8596
25°	8494	8664	8481
30°	8204	8170	8293
35°	7964	7964	7964
40°	7765	7796	7990
45°	7574	7565	7800
50°	7409	7464	7695
55°	7331	7300	7631
60°	7235	7223	7591
65°	7143	6918	7550
70°	7005	6606	7352
75°	6485	5866	6805
80°	5260	4782	5396
85°	3335	2993	2925



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	787.2	4.3
10°-20°	1968.2	10.9
20°-30°	2658.0	14.7
30°-40°	3043.8	16.8
40°-50°	3117.8	17.2
50°-60°	2829.0	15.6
60°-70°	2208.0	12.2
70°-80°	1252.3	6.9
80°-90°	262.9	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°	5413.4	29.9
0°-40°	8457.2	46.7
0°-60°	14404.0	79.5
0°-90°	18127.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18127.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8476	8476	8476	8476	8476	
5°	8467	8370	8454	8472	8445	791
15°	7079	7101	6925	6960	6885	1978
25°	5721	5796	5836	5695	5712	2640
35°	4848	4857	4848	4853	4848	3037
45°	3980	4011	3976	4139	4099	3077
55°	3125	3121	3112	3222	3253	2793
65°	2244	2195	2173	2274	2371	2223
75°	1247	1155	1128	1194	1309	1305
85°	216	194	194	181	190	285
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8476.1	8476.1	8476.1	8476.1	8476.1
2.5°	8529.0	8462.9	8405.6	8498.1	8489.3
5°	8467.3	8370.3	8454.0	8471.7	8445.2
7.5°	8304.2	8242.5	8246.9	8211.6	8207.2
10°	7876.6	7911.9	7841.4	7903.1	7872.2
12.5°	7510.8	7532.8	7409.4	7435.9	7400.6
15°	7078.8	7100.9	6924.6	6959.8	6884.9
17.5°	6607.2	6686.5	6541.1	6585.2	6505.8
20°	6254.6	6320.7	6325.1	6254.6	6003.3
22.5°	5976.9	6043.0	6095.9	5884.3	5857.9
25°	5721.2	5796.2	5835.8	5694.8	5712.4
27.5°	5465.6	5549.3	5549.3	5580.2	5540.5
30°	5280.5	5315.7	5258.4	5373.0	5337.8
32.5°	5060.1	5073.3	5024.8	5108.6	4985.2
35°	4848.5	4857.3	4848.5	4852.9	4848.5
37.5°	4645.8	4623.7	4663.4	4636.9	4720.7
40°	4421.0	4421.0	4438.6	4482.7	4548.8
42.5°	4213.8	4231.4	4209.4	4332.8	4359.3
45°	3980.2	4011.0	3975.8	4138.9	4099.2
47.5°	3768.6	3781.8	3773.0	3883.2	3892.0
50°	3539.4	3557.0	3565.9	3662.8	3676.1
52.5°	3349.9	3345.5	3314.6	3455.7	3477.7
55°	3125.1	3120.7	3111.9	3222.1	3252.9
57.5°	2895.9	2900.3	2922.3	2984.0	3059.0
60°	2688.7	2666.7	2684.3	2759.2	2821.0
62.5°	2477.1	2437.5	2397.8	2521.2	2578.5
65°	2243.5	2195.1	2173.0	2274.4	2371.4
67.5°	2027.6	1948.2	1935.0	2005.5	2120.1
70°	1780.7	1683.8	1679.3	1732.2	1868.9
72.5°	1507.4	1423.7	1401.7	1472.2	1595.6
75°	1247.4	1154.8	1128.4	1194.5	1309.1
77.5°	965.3	890.4	872.7	908.0	1000.6
80°	678.8	634.7	617.1	630.3	696.4
82.5°	427.6	396.7	387.9	383.5	418.7
85°	216.0	193.9	193.9	180.7	189.5
87.5°	66.1	61.7	57.3	44.1	48.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)