

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: P487096

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-5STD-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: P487096
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-35-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

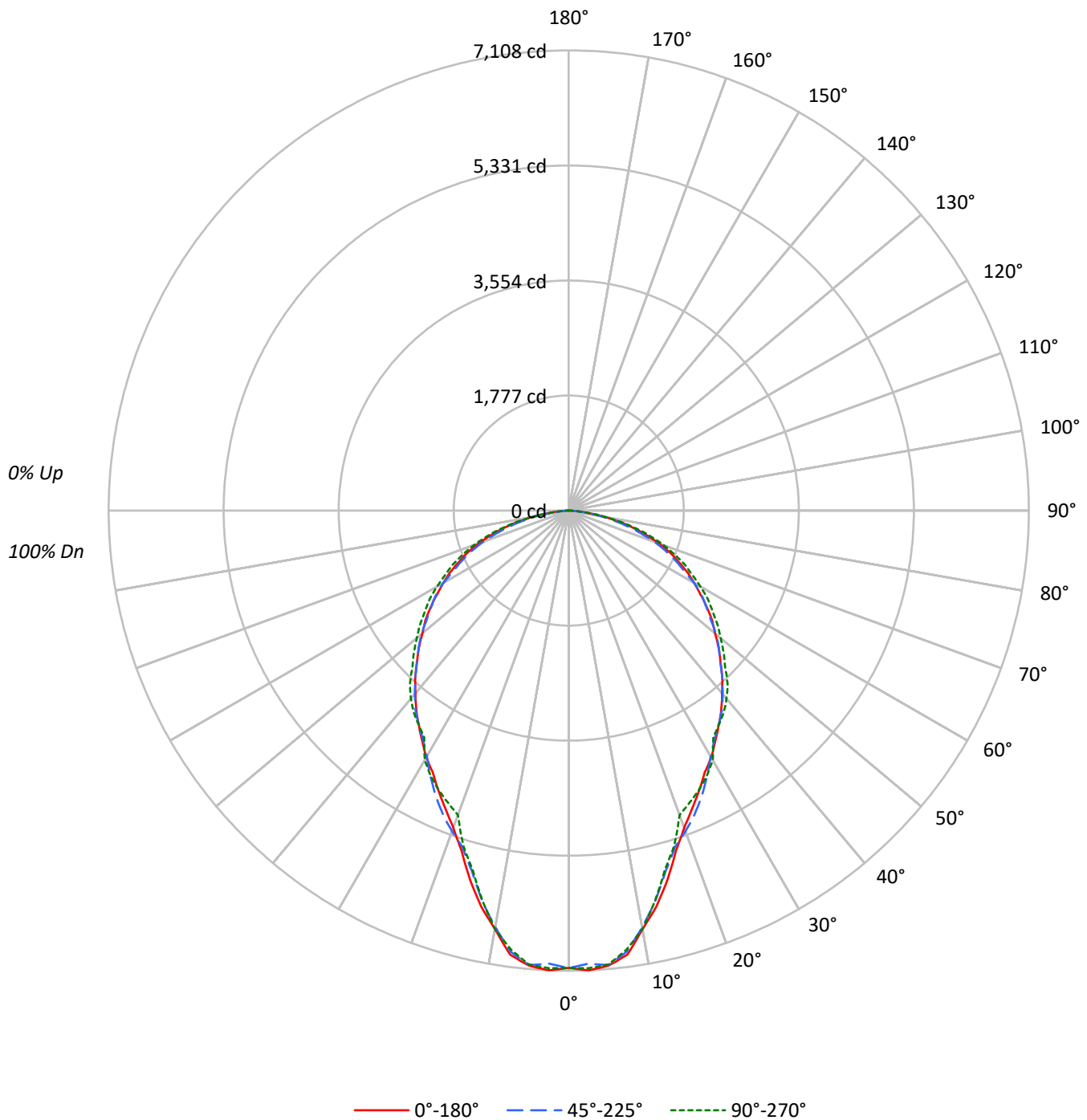
Lumens per Lamp: N/A
Luminaire Lumens: 15105.9 lumens
Efficiency: N/A
Efficacy: 90.7 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	9504	9504	9504
5°	9530	9515	9505
10°	8968	8928	8963
15°	8217	8038	7992
20°	7463	7547	7163
25°	7078	7220	7067
30°	6837	6808	6911
35°	6637	6637	6637
40°	6471	6497	6658
45°	6311	6304	6500
50°	6174	6220	6412
55°	6109	6083	6359
60°	6029	6019	6326
65°	5952	5765	6291
70°	5838	5506	6127
75°	5404	4888	5671
80°	4383	3984	4497
85°	2779	2495	2438



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	656.0	4.3
10°-20°	1640.1	10.9
20°-30°	2215.0	14.7
30°-40°	2536.5	16.8
40°-50°	2598.2	17.2
50°-60°	2357.5	15.6
60°-70°	1840.0	12.2
70°-80°	1043.6	6.9
80°-90°	219.0	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°	4511.2	29.9
0°-40°	7047.6	46.7
0°-60°	12003.3	79.5
0°-90°	15105.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15105.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7063	7063	7063	7063	7063	
5°	7056	6975	7045	7060	7038	659
15°	5899	5917	5770	5800	5737	1649
25°	4768	4830	4863	4746	4760	2200
35°	4040	4048	4040	4044	4040	2531
45°	3317	3342	3313	3449	3416	2564
55°	2604	2601	2593	2685	2711	2327
65°	1870	1829	1811	1895	1976	1853
75°	1040	962	940	995	1091	1087
85°	180	162	162	151	158	238
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7063.4	7063.4	7063.4	7063.4	7063.4
2.5°	7107.5	7052.4	7004.6	7081.8	7074.4
5°	7056.0	6975.2	7045.0	7059.7	7037.7
7.5°	6920.1	6868.7	6872.4	6843.0	6839.3
10°	6563.9	6593.2	6534.5	6585.9	6560.2
12.5°	6259.0	6277.3	6174.5	6196.5	6167.2
15°	5899.0	5917.4	5770.5	5799.8	5737.4
17.5°	5506.0	5572.1	5450.9	5487.6	5421.5
20°	5212.1	5267.2	5270.9	5212.1	5002.8
22.5°	4980.7	5035.8	5079.9	4903.6	4881.6
25°	4767.7	4830.1	4863.2	4745.7	4760.4
27.5°	4554.7	4624.4	4624.4	4650.2	4617.1
30°	4400.4	4429.8	4382.0	4477.5	4448.1
32.5°	4216.7	4227.8	4187.3	4257.1	4154.3
35°	4040.4	4047.8	4040.4	4044.1	4040.4
37.5°	3871.5	3853.1	3886.2	3864.1	3933.9
40°	3684.1	3684.1	3698.8	3735.6	3790.7
42.5°	3511.5	3526.2	3507.8	3610.7	3632.7
45°	3316.8	3342.5	3313.1	3449.1	3416.0
47.5°	3140.5	3151.5	3144.2	3236.0	3243.4
50°	2949.5	2964.2	2971.5	3052.4	3063.4
52.5°	2791.6	2787.9	2762.2	2879.7	2898.1
55°	2604.2	2600.6	2593.2	2685.0	2710.8
57.5°	2413.2	2416.9	2435.3	2486.7	2549.1
60°	2240.6	2222.2	2236.9	2299.4	2350.8
62.5°	2064.3	2031.2	1998.2	2101.0	2148.8
65°	1869.6	1829.2	1810.8	1895.3	1976.1
67.5°	1689.6	1623.5	1612.5	1671.3	1766.8
70°	1483.9	1403.1	1399.5	1443.5	1557.4
72.5°	1256.2	1186.4	1168.0	1226.8	1329.7
75°	1039.5	962.4	940.3	995.4	1090.9
77.5°	804.4	742.0	727.3	756.7	833.8
80°	565.7	528.9	514.2	525.3	580.4
82.5°	356.3	330.6	323.2	319.6	348.9
85°	180.0	161.6	161.6	150.6	157.9
87.5°	55.1	51.4	47.8	36.7	40.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)