

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: P487103

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-6HI-20-120-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: P487103
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-LD4-6HI-20-120-EDD
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

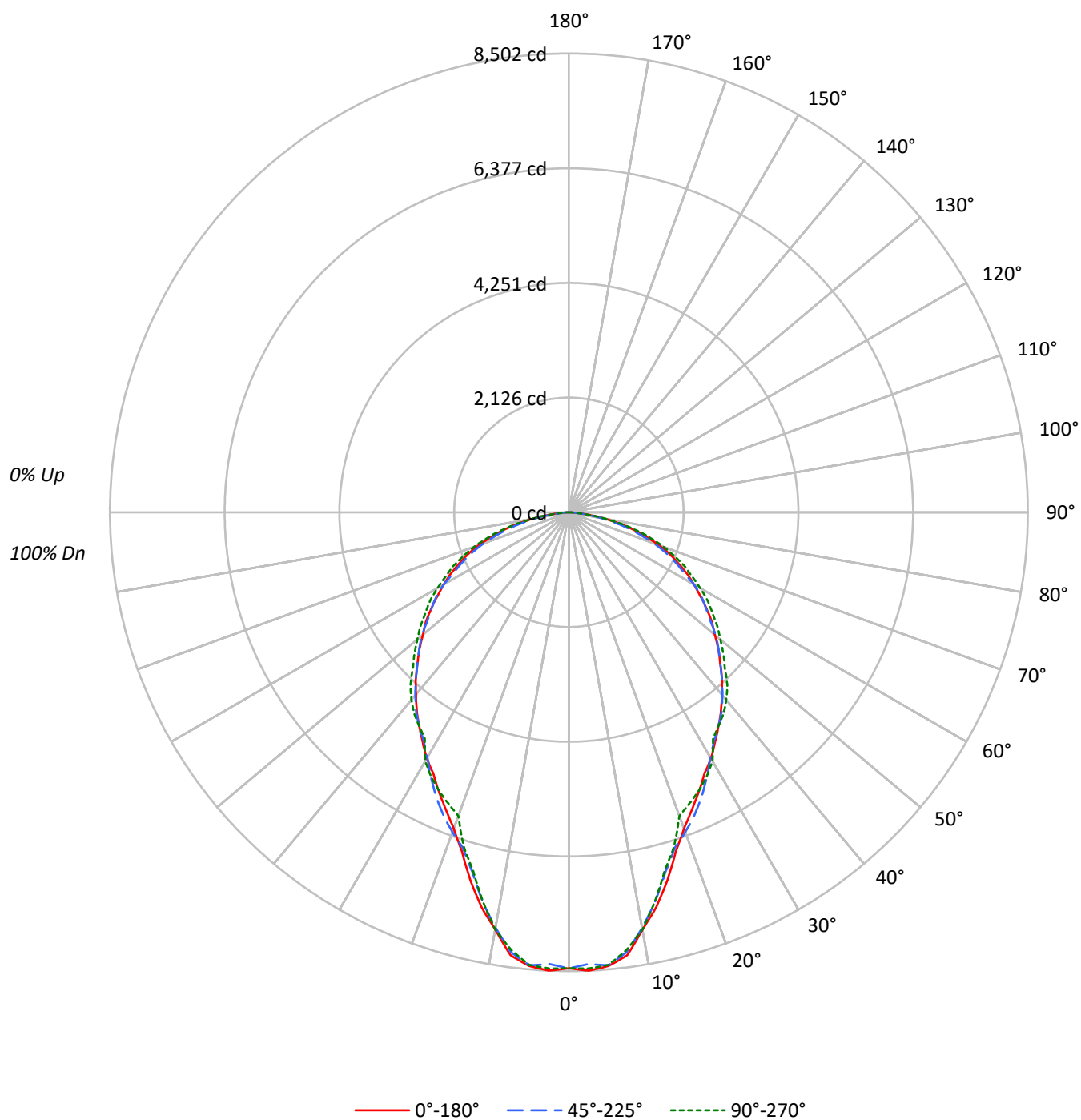
Lumens per Lamp: N/A
Luminaire Lumens: 18069.1 lumens
Efficiency: N/A
Efficacy: 68.4 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 264
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°	11368	11368	11368
5°	11400	11382	11370
10°	10727	10679	10721
15°	9829	9615	9560
20°	8927	9028	8568
25°	8466	8636	8454
30°	8178	8144	8266
35°	7938	7938	7938
40°	7740	7771	7964
45°	7549	7541	7775
50°	7385	7440	7670
55°	7307	7276	7606
60°	7212	7200	7567
65°	7120	6896	7526
70°	6983	6585	7329
75°	6464	5847	6784
80°	5243	4766	5379
85°	3324	2984	2916



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	784.7	4.3
10°-20°	1961.9	10.9
20°-30°	2649.5	14.7
30°-40°	3034.0	16.8
40°-50°	3107.8	17.2
50°-60°	2819.9	15.6
60°-70°	2200.9	12.2
70°-80°	1248.3	6.9
80°-90°	262.0	1.4
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°	5396.1	29.9
0°-40°	8430.1	46.7
0°-60°	14357.9	79.5
0°-90°	18069.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18069.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8449	8449	8449	8449	8449	
5°	8440	8344	8427	8445	8418	788
15°	7056	7078	6902	6938	6863	1972
25°	5703	5778	5817	5677	5694	2632
35°	4833	4842	4833	4837	4833	3027
45°	3968	3998	3963	4126	4086	3068
55°	3115	3111	3102	3212	3242	2784
65°	2236	2188	2166	2267	2364	2216
75°	1243	1151	1125	1191	1305	1301
85°	215	193	193	180	189	284
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8449.0	8449.0	8449.0	8449.0	8449.0
2.5°	8501.7	8435.8	8378.7	8470.9	8462.1
5°	8440.2	8343.5	8427.0	8444.6	8418.2
7.5°	8277.6	8216.1	8220.5	8185.3	8181.0
10°	7851.4	7886.6	7816.3	7877.8	7847.0
12.5°	7486.8	7508.7	7385.7	7412.1	7376.9
15°	7056.2	7078.1	6902.4	6937.6	6862.9
17.5°	6586.1	6665.1	6520.2	6564.1	6485.0
20°	6234.6	6300.5	6304.9	6234.6	5984.1
22.5°	5957.8	6023.7	6076.4	5865.5	5839.1
25°	5702.9	5777.6	5817.2	5676.6	5694.2
27.5°	5448.1	5531.6	5531.6	5562.3	5522.8
30°	5263.6	5298.7	5241.6	5355.8	5320.7
32.5°	5043.9	5057.1	5008.7	5092.2	4969.2
35°	4833.0	4841.8	4833.0	4837.4	4833.0
37.5°	4630.9	4608.9	4648.5	4622.1	4705.6
40°	4406.8	4406.8	4424.4	4468.3	4534.2
42.5°	4200.3	4217.9	4195.9	4318.9	4345.3
45°	3967.5	3998.2	3963.1	4125.6	4086.1
47.5°	3756.6	3769.7	3761.0	3870.8	3879.6
50°	3528.1	3545.7	3554.5	3651.1	3664.3
52.5°	3339.2	3334.8	3304.0	3444.6	3466.6
55°	3115.1	3110.7	3101.9	3211.7	3242.5
57.5°	2886.6	2891.0	2913.0	2974.5	3049.2
60°	2680.1	2658.1	2675.7	2750.4	2811.9
62.5°	2469.2	2429.7	2390.1	2513.2	2570.3
65°	2236.4	2188.0	2166.1	2267.1	2363.8
67.5°	2021.1	1942.0	1928.8	1999.1	2113.3
70°	1775.0	1678.4	1674.0	1726.7	1862.9
72.5°	1502.6	1419.1	1397.2	1467.5	1590.5
75°	1243.4	1151.1	1124.8	1190.7	1304.9
77.5°	962.2	887.5	869.9	905.1	997.4
80°	676.6	632.7	615.1	628.3	694.2
82.5°	426.2	395.4	386.6	382.2	417.4
85°	215.3	193.3	193.3	180.1	188.9
87.5°	65.9	61.5	57.1	43.9	48.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)