

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: P487040

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-4HI-50-120-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: P487040
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-LD4-4HI-50-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

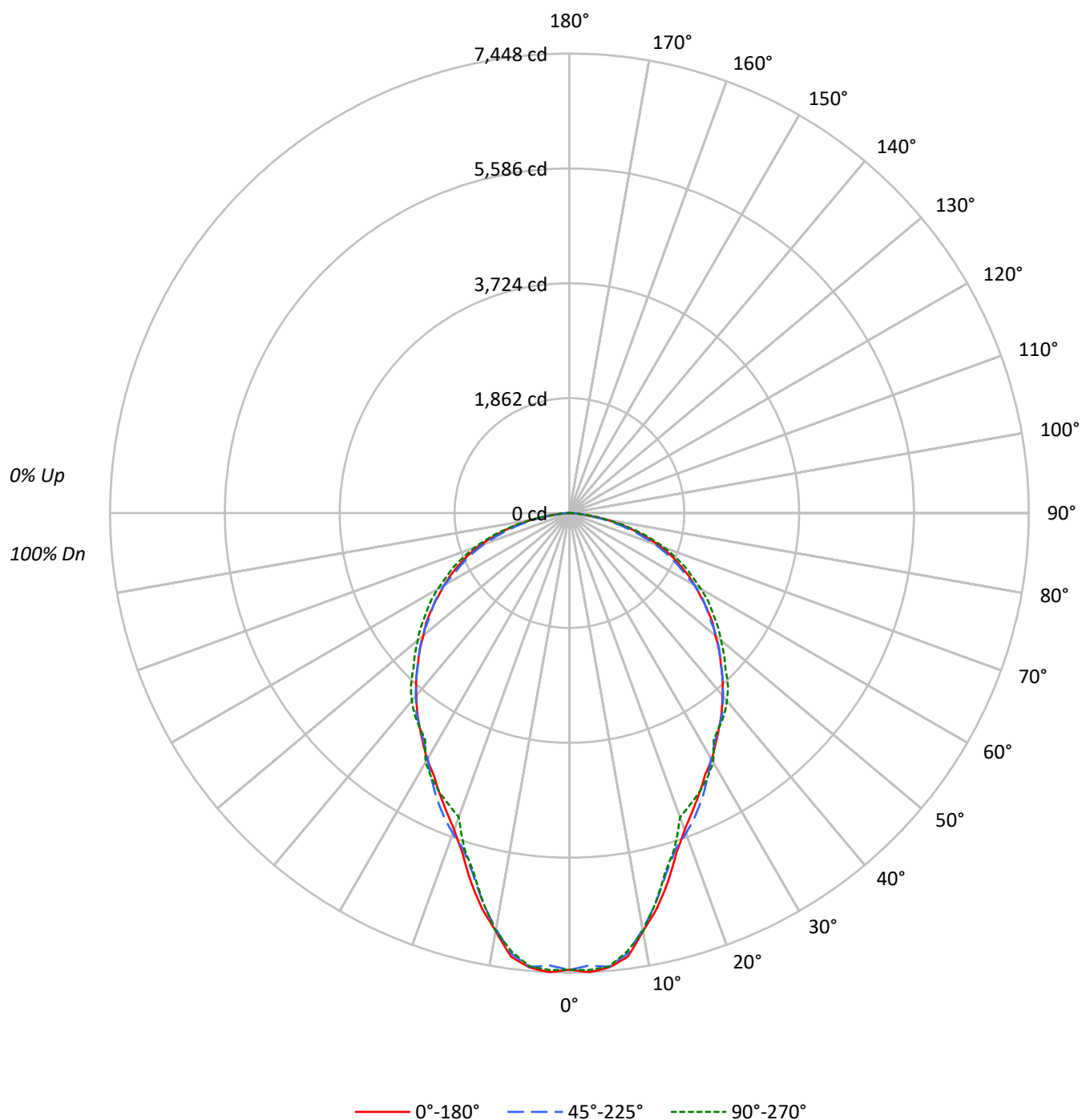
Lumens per Lamp: N/A
Luminaire Lumens: 15830.1 lumens
Efficiency: N/A
Efficacy: 89.9 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 176
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°	9959	9959	9959
5°	9987	9971	9961
10°	9398	9356	9393
15°	8611	8423	8375
20°	7821	7909	7507
25°	7417	7566	7406
30°	7164	7134	7242
35°	6955	6955	6955
40°	6781	6808	6977
45°	6614	6607	6812
50°	6470	6518	6720
55°	6402	6375	6664
60°	6318	6308	6629
65°	6238	6042	6593
70°	6118	5769	6421
75°	5663	5123	5943
80°	4593	4176	4713
85°	2912	2615	2555



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	687.5	4.3
10°-20°	1718.8	10.9
20°-30°	2321.2	14.7
30°-40°	2658.1	16.8
40°-50°	2722.7	17.2
50°-60°	2470.5	15.6
60°-70°	1928.2	12.2
70°-80°	1093.6	6.9
80°-90°	229.5	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°	4727.4	29.9
0°-40°	7385.5	46.7
0°-60°	12578.7	79.5
0°-90°	15830.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15830.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7402	7402	7402	7402	7402	
5°	7394	7310	7383	7398	7375	691
15°	6182	6201	6047	6078	6012	1728
25°	4996	5062	5096	4973	4989	2306
35°	4234	4242	4234	4238	4234	2652
45°	3476	3503	3472	3614	3580	2687
55°	2729	2725	2718	2814	2841	2439
65°	1959	1917	1898	1986	2071	1942
75°	1089	1008	985	1043	1143	1140
85°	189	169	169	158	166	249
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7402.0	7402.0	7402.0	7402.0	7402.0
2.5°	7448.2	7390.5	7340.4	7421.3	7413.6
5°	7394.3	7309.6	7382.8	7398.2	7375.1
7.5°	7251.9	7198.0	7201.9	7171.1	7167.2
10°	6878.5	6909.3	6847.7	6901.6	6874.7
12.5°	6559.0	6578.3	6470.5	6493.6	6462.8
15°	6181.8	6201.1	6047.1	6077.9	6012.5
17.5°	5770.0	5839.2	5712.2	5750.7	5681.4
20°	5462.0	5519.8	5523.6	5462.0	5242.6
22.5°	5219.5	5277.3	5323.5	5138.7	5115.6
25°	4996.3	5061.7	5096.3	4973.2	4988.6
27.5°	4773.0	4846.2	4846.2	4873.1	4838.5
30°	4611.3	4642.1	4592.1	4692.2	4661.4
32.5°	4418.9	4430.4	4388.1	4461.2	4353.5
35°	4234.1	4241.8	4234.1	4238.0	4234.1
37.5°	4057.1	4037.8	4072.5	4049.4	4122.5
40°	3860.8	3860.8	3876.2	3914.6	3972.4
42.5°	3679.8	3695.2	3676.0	3783.8	3806.9
45°	3475.8	3502.8	3472.0	3614.4	3579.8
47.5°	3291.1	3302.6	3294.9	3391.2	3398.8
50°	3090.9	3106.3	3114.0	3198.7	3210.2
52.5°	2925.4	2921.5	2894.6	3017.8	3037.0
55°	2729.1	2725.2	2717.5	2813.8	2840.7
57.5°	2528.9	2532.8	2552.0	2605.9	2671.3
60°	2348.0	2328.8	2344.2	2409.6	2463.5
62.5°	2163.3	2128.6	2094.0	2201.7	2251.8
65°	1959.2	1916.9	1897.7	1986.2	2070.9
67.5°	1770.6	1701.3	1689.8	1751.4	1851.5
70°	1555.1	1470.4	1466.5	1512.7	1632.1
72.5°	1316.4	1243.3	1224.0	1285.6	1393.4
75°	1089.3	1008.5	985.4	1043.1	1143.2
77.5°	843.0	777.5	762.1	792.9	873.8
80°	592.8	554.3	538.9	550.4	608.2
82.5°	373.4	346.4	338.7	334.9	365.7
85°	188.6	169.4	169.4	157.8	165.5
87.5°	57.7	53.9	50.0	38.5	42.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)