

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: P487039

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-4HI-40-120-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: P487039
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-40-120-EDD
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

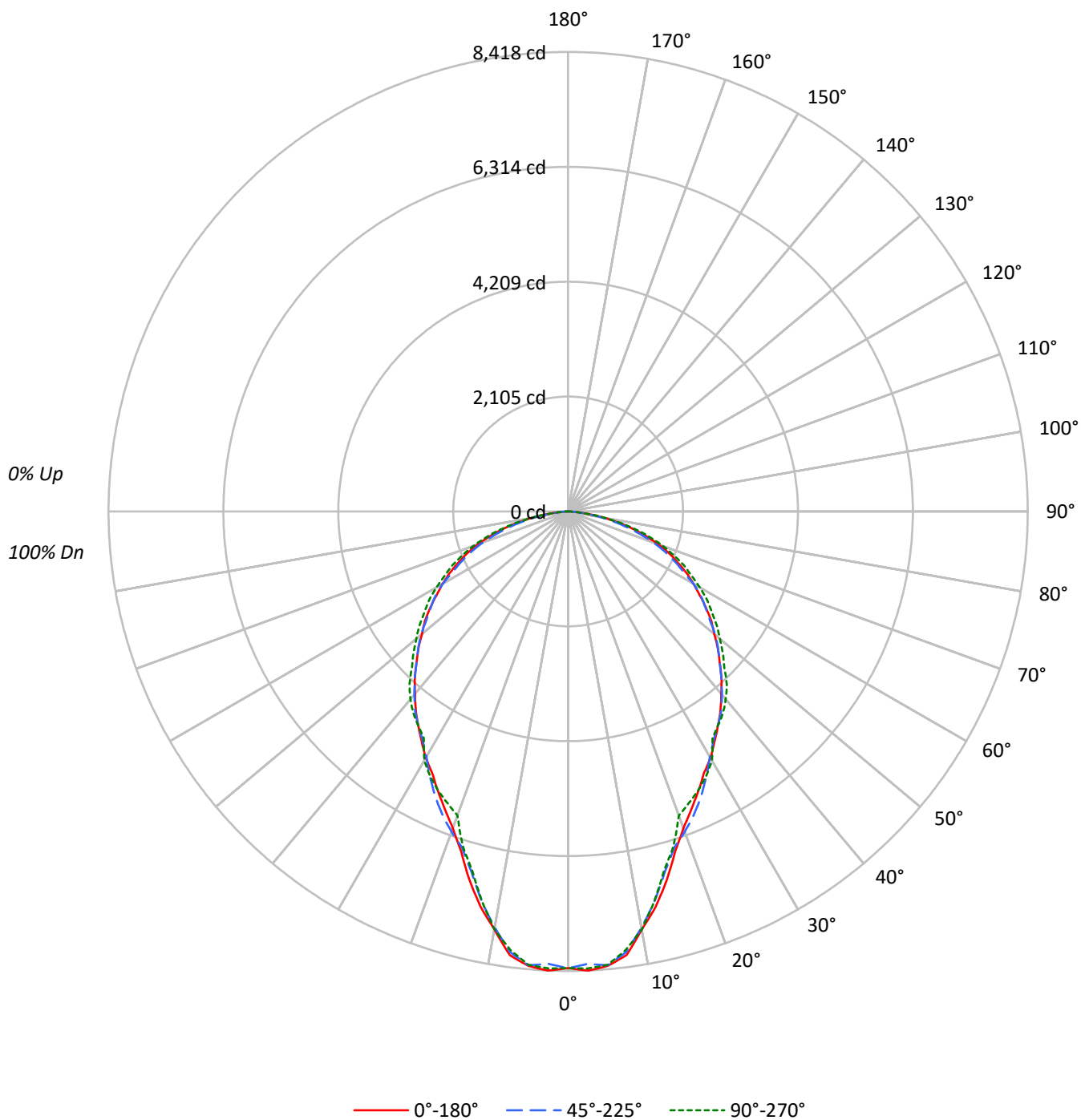
Lumens per Lamp: N/A
Luminaire Lumens: 17891.9 lumens
Efficiency: N/A
Efficacy: 101.7 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	11256	11256	11256
5°	11288	11270	11258
10°	10622	10574	10616
15°	9733	9520	9466
20°	8839	8939	8484
25°	8383	8551	8371
30°	8098	8064	8185
35°	7861	7861	7861
40°	7664	7695	7886
45°	7475	7467	7699
50°	7313	7367	7595
55°	7236	7205	7532
60°	7141	7130	7493
65°	7050	6828	7452
70°	6914	6521	7257
75°	6400	5790	6717
80°	5191	4720	5326
85°	3291	2955	2888



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	777.0	4.3
10°-20°	1942.6	10.9
20°-30°	2623.5	14.7
30°-40°	3004.3	16.8
40°-50°	3077.4	17.2
50°-60°	2792.3	15.6
60°-70°	2179.3	12.2
70°-80°	1236.1	6.9
80°-90°	259.4	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°	5343.2	29.9
0°-40°	8347.4	46.7
0°-60°	14217.1	79.5
0°-90°	17891.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17891.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8366	8366	8366	8366	8366	
5°	8357	8262	8344	8362	8336	781
15°	6987	7009	6835	6870	6796	1953
25°	5647	5721	5760	5621	5638	2606
35°	4786	4794	4786	4790	4786	2998
45°	3928	3959	3924	4085	4046	3037
55°	3084	3080	3072	3180	3211	2757
65°	2214	2167	2145	2245	2341	2195
75°	1231	1140	1114	1179	1292	1288
85°	213	191	191	178	187	282
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8366.1	8366.1	8366.1	8366.1	8366.1
2.5°	8418.3	8353.1	8296.5	8387.9	8379.2
5°	8357.4	8261.7	8344.4	8361.8	8335.7
7.5°	8196.4	8135.5	8139.9	8105.1	8100.7
10°	7774.4	7809.2	7739.6	7800.5	7770.1
12.5°	7413.3	7435.1	7313.3	7339.4	7304.6
15°	6987.0	7008.7	6834.7	6869.5	6795.6
17.5°	6521.5	6599.8	6456.2	6499.7	6421.4
20°	6173.4	6238.7	6243.0	6173.4	5925.4
22.5°	5899.3	5964.6	6016.8	5808.0	5781.9
25°	5647.0	5721.0	5760.1	5620.9	5638.3
27.5°	5394.7	5477.3	5477.3	5507.8	5468.6
30°	5212.0	5246.8	5190.2	5303.3	5268.5
32.5°	4994.4	5007.5	4959.6	5042.3	4920.5
35°	4785.6	4794.3	4785.6	4790.0	4785.6
37.5°	4585.5	4563.7	4602.9	4576.8	4659.4
40°	4363.6	4363.6	4381.0	4424.5	4489.8
42.5°	4159.1	4176.5	4154.8	4276.6	4302.7
45°	3928.5	3959.0	3924.2	4085.2	4046.0
47.5°	3719.7	3732.8	3724.1	3832.8	3841.5
50°	3493.5	3510.9	3519.6	3615.3	3628.4
52.5°	3306.4	3302.1	3271.6	3410.8	3432.6
55°	3084.5	3080.2	3071.5	3180.3	3210.7
57.5°	2858.3	2862.7	2884.4	2945.3	3019.3
60°	2653.8	2632.1	2649.5	2723.4	2784.4
62.5°	2445.0	2405.9	2366.7	2488.5	2545.1
65°	2214.4	2166.6	2144.8	2244.9	2340.6
67.5°	2001.3	1922.9	1909.9	1979.5	2092.6
70°	1757.6	1661.9	1657.6	1709.8	1844.6
72.5°	1487.9	1405.2	1383.5	1453.1	1574.9
75°	1231.2	1139.8	1113.7	1179.0	1292.1
77.5°	952.8	878.8	861.4	896.2	987.6
80°	670.0	626.5	609.1	622.1	687.4
82.5°	422.0	391.5	382.8	378.5	413.3
85°	213.2	191.4	191.4	178.4	187.1
87.5°	65.3	60.9	56.6	43.5	47.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)