

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: P487020

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-3STD-27-120-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: P487020
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-LD4-3STD-27-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

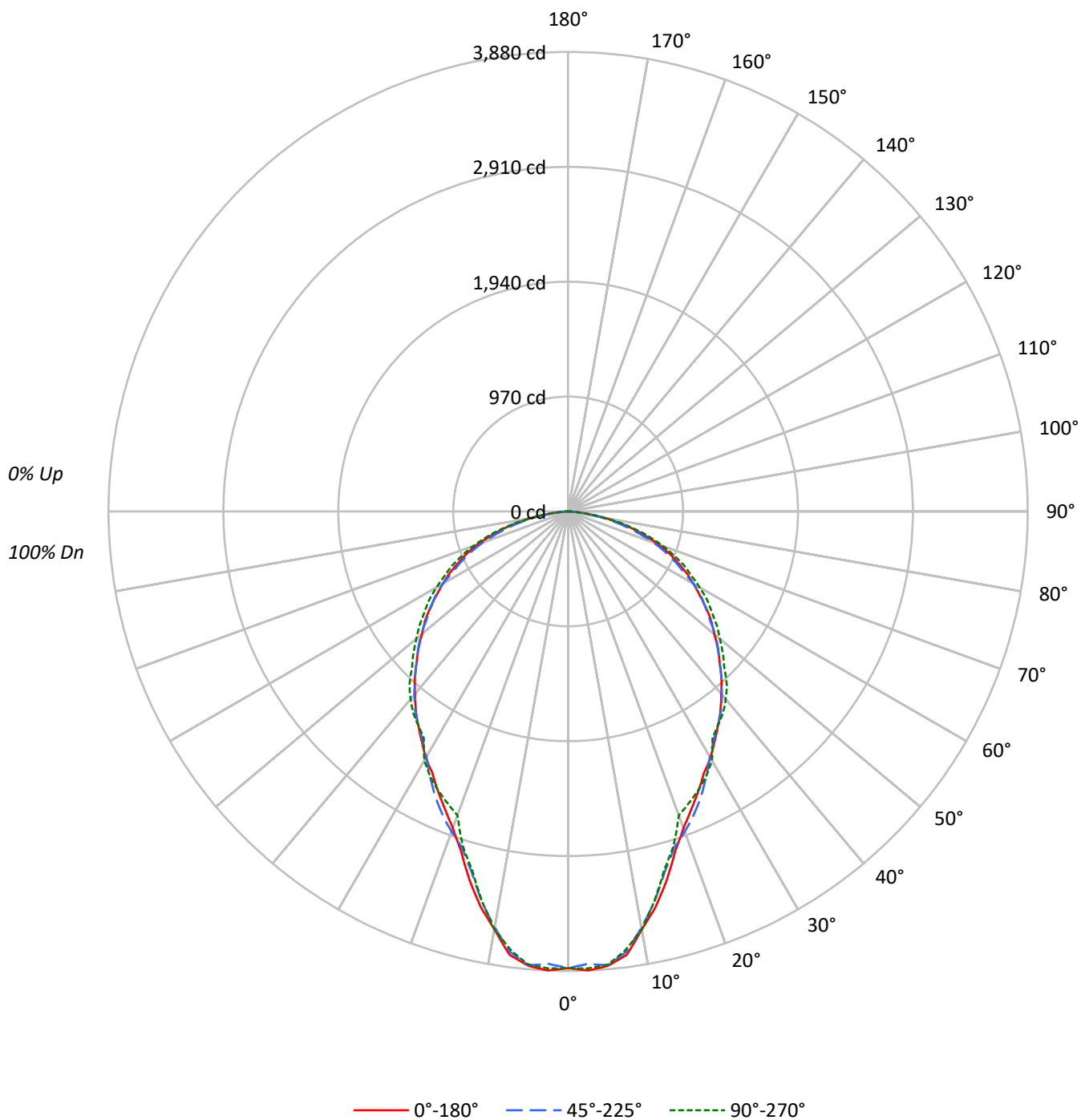
Lumens per Lamp: N/A
Luminaire Lumens: 8245.4 lumens
Efficiency: N/A
Efficacy: 82.5 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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

TEST NUMBER: P487020

CATALOG NUMBER: ORLG-24-4-INS-89BC-LD4-3STD-27-120-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P487020

CATALOG NUMBER: ORLG-24-4-INS-89BC-LD4-3STD-27-120-EDD-90

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°	5188	5188	5188
5°	5202	5194	5188
10°	4895	4873	4892
15°	4485	4387	4362
20°	4074	4120	3910
25°	3863	3941	3858
30°	3732	3716	3772
35°	3622	3622	3622
40°	3532	3546	3634
45°	3445	3441	3548
50°	3370	3395	3500
55°	3335	3320	3471
60°	3291	3286	3453
65°	3249	3147	3434
70°	3186	3005	3344
75°	2950	2668	3096
80°	2393	2175	2455
85°	1516	1362	1331



TEST NUMBER: P487020

CATALOG NUMBER: ORLG-24-4-INS-89BC-LD4-3STD-27-120-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	358.1	4.3
10°-20°	895.3	10.9
20°-30°	1209.0	14.7
30°-40°	1384.5	16.8
40°-50°	1418.2	17.2
50°-60°	1286.8	15.6
60°-70°	1004.3	12.2
70°-80°	569.6	6.9
80°-90°	119.6	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°	2462.4	29.9
0°-40°	3846.9	46.7
0°-60°	6551.9	79.5
0°-90°	8245.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8245.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3856	3856	3856	3856	3856	
5°	3852	3807	3846	3854	3841	360
15°	3220	3230	3150	3166	3132	900
25°	2602	2636	2654	2590	2598	1201
35°	2205	2209	2205	2207	2205	1382
45°	1810	1824	1808	1883	1865	1400
55°	1422	1420	1416	1466	1480	1270
65°	1020	998	988	1034	1079	1011
75°	567	525	513	543	596	594
85°	98	88	88	82	86	130
90°	0	0	0	0	0	



TEST NUMBER: P487020

CATALOG NUMBER: ORLG-24-4-INS-89BC-LD4-3STD-27-120-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3855.5	3855.5	3855.5	3855.5	3855.5
2.5°	3879.5	3849.5	3823.4	3865.5	3861.5
5°	3851.5	3807.4	3845.5	3853.5	3841.4
7.5°	3777.3	3749.2	3751.2	3735.2	3733.2
10°	3582.8	3598.9	3566.8	3594.8	3580.8
12.5°	3416.4	3426.4	3370.3	3382.3	3366.3
15°	3219.9	3229.9	3149.7	3165.8	3131.7
17.5°	3005.4	3041.5	2975.3	2995.4	2959.3
20°	2845.0	2875.1	2877.1	2845.0	2730.7
22.5°	2718.7	2748.8	2772.8	2676.6	2664.6
25°	2602.4	2636.5	2654.5	2590.4	2598.4
27.5°	2486.1	2524.2	2524.2	2538.2	2520.2
30°	2401.9	2417.9	2391.9	2444.0	2428.0
32.5°	2301.7	2307.7	2285.6	2323.7	2267.6
35°	2205.4	2209.4	2205.4	2207.4	2205.4
37.5°	2113.2	2103.2	2121.2	2109.2	2147.3
40°	2010.9	2010.9	2019.0	2039.0	2069.1
42.5°	1916.7	1924.7	1914.7	1970.8	1982.9
45°	1810.5	1824.5	1808.4	1882.6	1864.6
47.5°	1714.2	1720.2	1716.2	1766.3	1770.4
50°	1610.0	1618.0	1622.0	1666.1	1672.1
52.5°	1523.7	1521.7	1507.7	1571.9	1581.9
55°	1421.5	1419.5	1415.5	1465.6	1479.6
57.5°	1317.2	1319.2	1329.3	1357.3	1391.4
60°	1223.0	1213.0	1221.0	1255.1	1283.2
62.5°	1126.8	1108.7	1090.7	1146.8	1172.9
65°	1020.5	998.5	988.4	1034.5	1078.7
67.5°	922.3	886.2	880.2	912.2	964.4
70°	810.0	765.9	763.9	787.9	850.1
72.5°	685.7	647.6	637.6	669.6	725.8
75°	567.4	525.3	513.3	543.3	595.5
77.5°	439.1	405.0	397.0	413.0	455.1
80°	308.8	288.7	280.7	286.7	316.8
82.5°	194.5	180.4	176.4	174.4	190.5
85°	98.2	88.2	88.2	82.2	86.2
87.5°	30.1	28.1	26.1	20.0	22.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)