

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: P487104

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-6HI-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: P487104
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-27-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

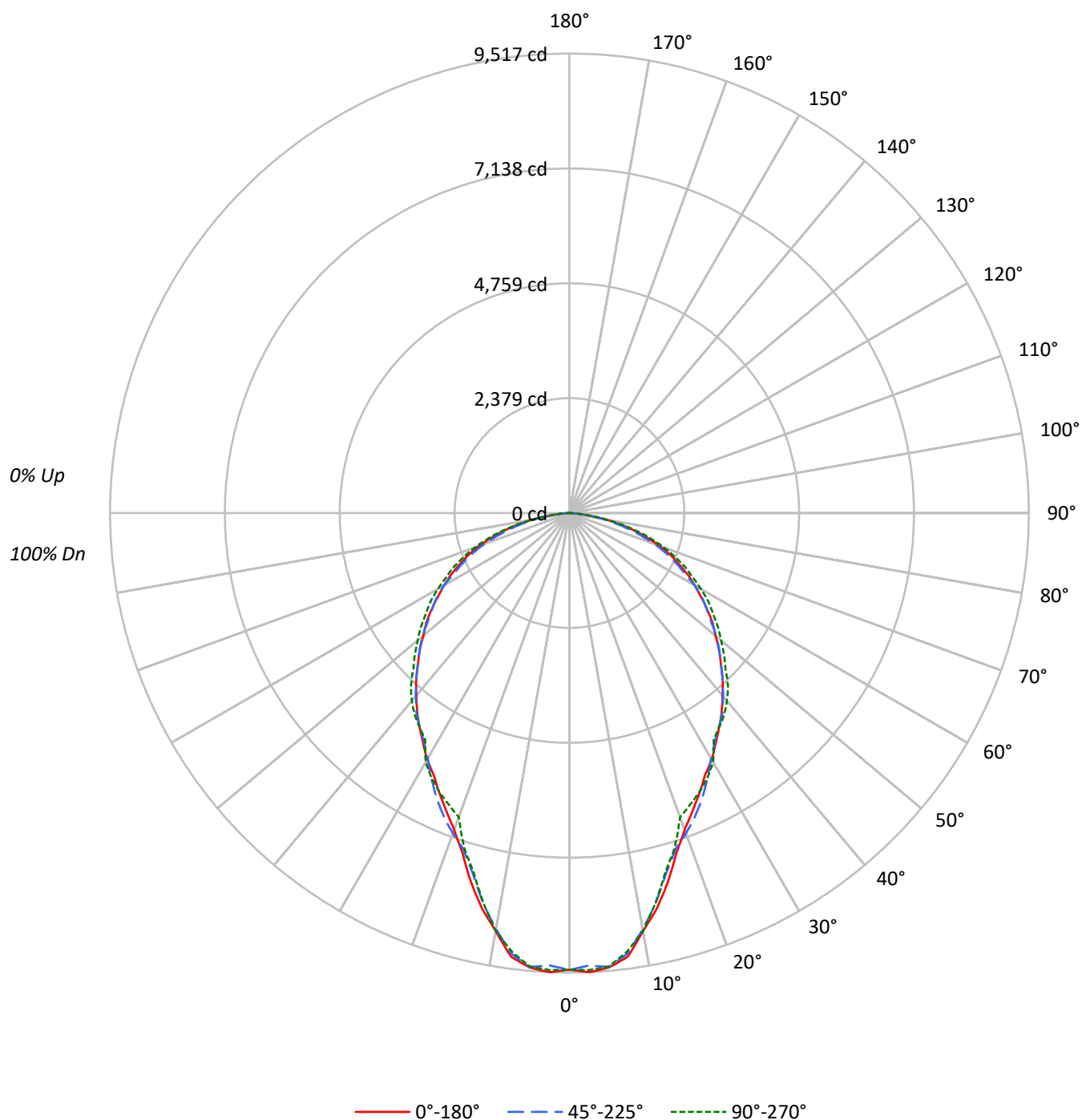
Lumens per Lamp: N/A
Luminaire Lumens: 20227.3 lumens
Efficiency: N/A
Efficacy: 76.6 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	12726	12726	12726
5°	12761	12741	12728
10°	12008	11955	12002
15°	11003	10763	10702
20°	9993	10106	9592
25°	9478	9668	9463
30°	9154	9116	9254
35°	8887	8887	8887
40°	8665	8699	8915
45°	8451	8442	8704
50°	8267	8329	8586
55°	8180	8146	8515
60°	8073	8060	8471
65°	7970	7720	8424
70°	7817	7372	8204
75°	7236	6546	7594
80°	5869	5336	6021
85°	3721	3341	3265



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	878.5	4.3
10°-20°	2196.2	10.9
20°-30°	2965.9	14.7
30°-40°	3396.4	16.8
40°-50°	3479.0	17.2
50°-60°	3156.8	15.6
60°-70°	2463.8	12.2
70°-80°	1397.4	6.9
80°-90°	293.3	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°	6040.6	29.9
0°-40°	9437.0	46.7
0°-60°	16072.8	79.5
0°-90°	20227.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	20227.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9458	9458	9458	9458	9458	
5°	9448	9340	9434	9453	9424	882
15°	7899	7924	7727	7766	7683	2208
25°	6384	6468	6512	6355	6374	2946
35°	5410	5420	5410	5415	5410	3389
45°	4441	4476	4436	4618	4574	3434
55°	3487	3482	3472	3595	3630	3116
65°	2504	2449	2425	2538	2646	2481
75°	1392	1289	1259	1333	1461	1456
85°	241	216	216	202	212	318
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9458.1	9458.1	9458.1	9458.1	9458.1
2.5°	9517.1	9443.4	9379.4	9482.7	9472.9
5°	9448.3	9340.1	9433.5	9453.2	9423.7
7.5°	9266.3	9197.4	9202.4	9163.0	9158.1
10°	8789.2	8828.6	8749.9	8818.7	8784.3
12.5°	8381.0	8405.6	8267.9	8297.4	8258.0
15°	7899.0	7923.6	7726.8	7766.2	7682.6
17.5°	7372.7	7461.2	7298.9	7348.1	7259.6
20°	6979.2	7053.0	7057.9	6979.2	6698.9
22.5°	6669.4	6743.2	6802.2	6566.1	6536.6
25°	6384.1	6467.7	6512.0	6354.6	6374.3
27.5°	6098.8	6192.3	6192.3	6226.7	6182.5
30°	5892.3	5931.6	5867.7	5995.6	5956.2
32.5°	5646.3	5661.1	5607.0	5700.4	5562.7
35°	5410.3	5420.1	5410.3	5415.2	5410.3
37.5°	5184.0	5159.4	5203.7	5174.2	5267.6
40°	4933.2	4933.2	4952.8	5002.0	5075.8
42.5°	4702.0	4721.7	4697.1	4834.8	4864.3
45°	4441.3	4475.8	4436.4	4618.4	4574.1
47.5°	4205.2	4220.0	4210.2	4333.1	4343.0
50°	3949.5	3969.2	3979.0	4087.2	4102.0
52.5°	3738.0	3733.1	3698.7	3856.0	3880.6
55°	3487.2	3482.2	3472.4	3595.4	3629.8
57.5°	3231.4	3236.3	3260.9	3329.8	3413.4
60°	3000.2	2975.6	2995.3	3078.9	3147.8
62.5°	2764.2	2719.9	2675.6	2813.3	2877.3
65°	2503.5	2449.4	2424.8	2537.9	2646.1
67.5°	2262.5	2173.9	2159.2	2237.9	2365.8
70°	1987.0	1878.8	1873.9	1932.9	2085.4
72.5°	1682.1	1588.6	1564.1	1642.8	1780.5
75°	1391.9	1288.6	1259.1	1332.9	1460.8
77.5°	1077.1	993.5	973.8	1013.2	1116.5
80°	757.4	708.3	688.6	703.3	777.1
82.5°	477.1	442.7	432.8	427.9	467.2
85°	241.0	216.4	216.4	201.7	211.5
87.5°	73.8	68.9	63.9	49.2	54.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)