

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: P486942

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-1LO-40-120-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: P486942  
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-LD4-1LO-40-120-EDD-90  
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

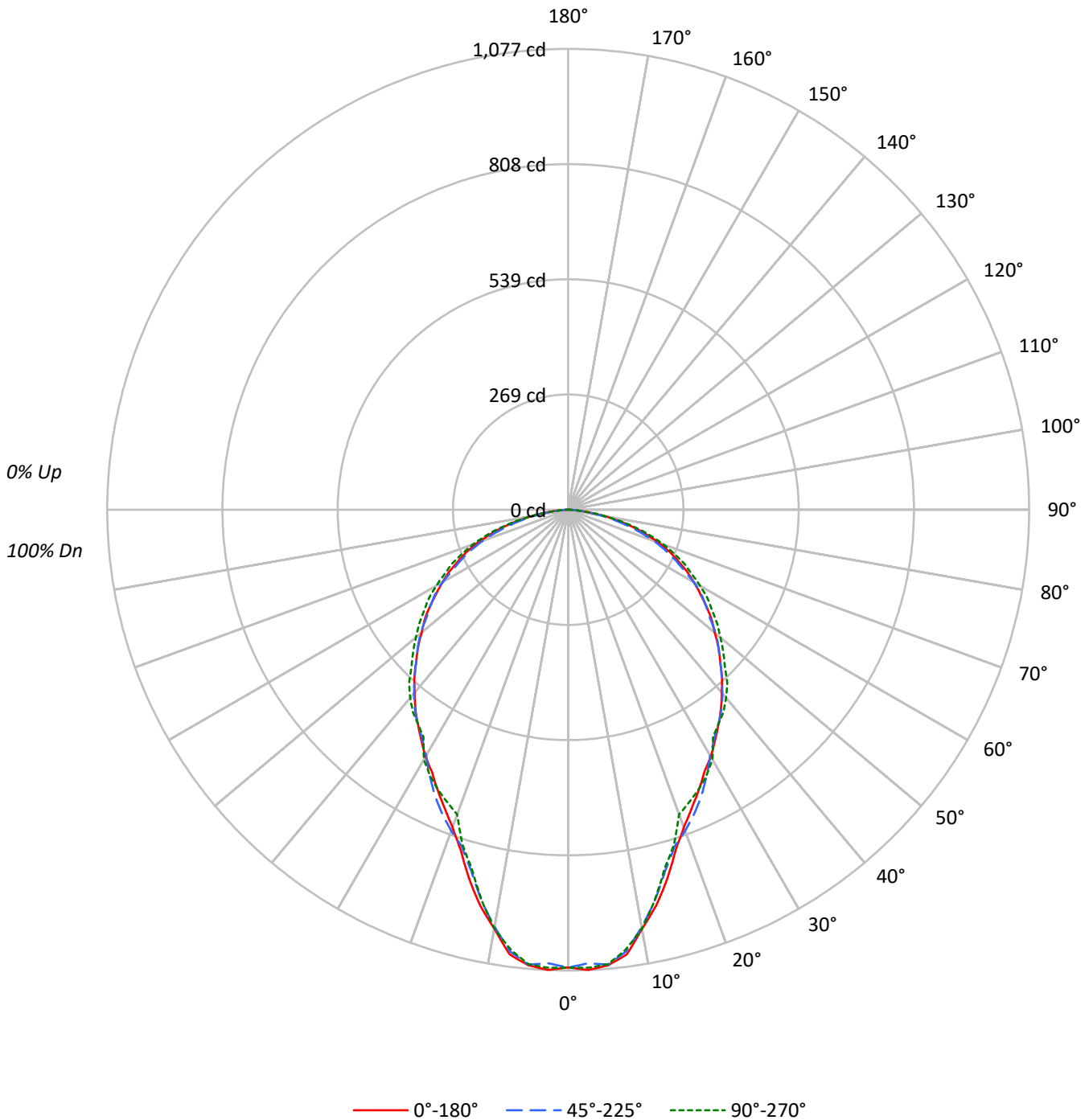
Lumens per Lamp: N/A  
Luminaire Lumens: 2288.1 lumens  
Efficiency: N/A  
Efficacy: 97.8 lumens/watt  
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
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				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	81	76	82	78	74	79	76	73	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51
5	77	64	55	48	75	63	54	48	61	53	48	59	52	47	57	51	47	45
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39
7	66	53	44	38	64	52	44	38	50	43	37	49	42	37	47	41	37	35
8	61	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31
9	58	44	36	31	56	44	36	31	43	35	30	41	35	30	40	35	30	28
10	54	41	33	28	53	40	33	28	40	33	28	39	32	28	38	32	28	26

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1440	1440	1440
5°	1444	1441	1440
10°	1358	1352	1358
15°	1245	1218	1210
20°	1130	1143	1085
25°	1072	1094	1071
30°	1035	1031	1047
35°	1005	1005	1005
40°	980	984	1009
45°	956	955	985
50°	935	942	971
55°	925	921	963
60°	913	912	958
65°	902	873	953
70°	884	834	928
75°	819	740	859
80°	664	604	681
85°	421	378	369



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	99.4	4.3
10°-20°	248.4	10.9
20°-30°	335.5	14.7
30°-40°	384.2	16.8
40°-50°	393.5	17.2
50°-60°	357.1	15.6
60°-70°	278.7	12.2
70°-80°	158.1	6.9
80°-90°	33.2	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°	683.3	29.9
0°-40°	1067.5	46.7
0°-60°	1818.2	79.5
0°-90°	2288.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2288.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1070	1070	1070	1070	1070	
5°	1069	1056	1067	1069	1066	100
15°	894	896	874	878	869	250
25°	722	732	737	719	721	333
35°	612	613	612	613	612	383
45°	502	506	502	522	517	388
55°	394	394	393	407	411	353
65°	283	277	274	287	299	281
75°	158	146	142	151	165	165
85°	27	24	24	23	24	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1069.9	1069.9	1069.9	1069.9	1069.9
2.5°	1076.6	1068.2	1061.0	1072.7	1071.6
5°	1068.8	1056.5	1067.1	1069.3	1066.0
7.5°	1048.2	1040.4	1041.0	1036.5	1036.0
10°	994.2	998.7	989.8	997.6	993.7
12.5°	948.1	950.8	935.3	938.6	934.1
15°	893.5	896.3	874.1	878.5	869.0
17.5°	834.0	844.0	825.7	831.2	821.2
20°	789.5	797.8	798.4	789.5	757.8
22.5°	754.4	762.8	769.5	742.8	739.4
25°	722.2	731.6	736.6	718.8	721.1
27.5°	689.9	700.5	700.5	704.4	699.4
30°	666.5	671.0	663.7	678.2	673.8
32.5°	638.7	640.4	634.3	644.8	629.3
35°	612.0	613.1	612.0	612.6	612.0
37.5°	586.4	583.6	588.6	585.3	595.9
40°	558.0	558.0	560.3	565.8	574.2
42.5°	531.9	534.1	531.3	546.9	550.2
45°	502.4	506.3	501.8	522.4	517.4
47.5°	475.7	477.4	476.3	490.2	491.3
50°	446.8	449.0	450.1	462.3	464.0
52.5°	422.8	422.3	418.4	436.2	439.0
55°	394.5	393.9	392.8	406.7	410.6
57.5°	365.5	366.1	368.9	376.7	386.1
60°	339.4	336.6	338.8	348.3	356.1
62.5°	312.7	307.7	302.7	318.2	325.5
65°	283.2	277.1	274.3	287.1	299.3
67.5°	255.9	245.9	244.2	253.1	267.6
70°	224.8	212.5	212.0	218.7	235.9
72.5°	190.3	179.7	176.9	185.8	201.4
75°	157.5	145.8	142.4	150.8	165.2
77.5°	121.8	112.4	110.2	114.6	126.3
80°	85.7	80.1	77.9	79.6	87.9
82.5°	54.0	50.1	49.0	48.4	52.9
85°	27.3	24.5	24.5	22.8	23.9
87.5°	8.3	7.8	7.2	5.6	6.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)