

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: P485627

Luminaire Tested: **ORLG-24-2-INS-89BC-LD4-1HI-20-120-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: P485627  
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-24-2-INS-89BC-LD4-1HI-20-120-EDD  
Description: 2X2 ORL LED LUMINAIRE WITH 89BC LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

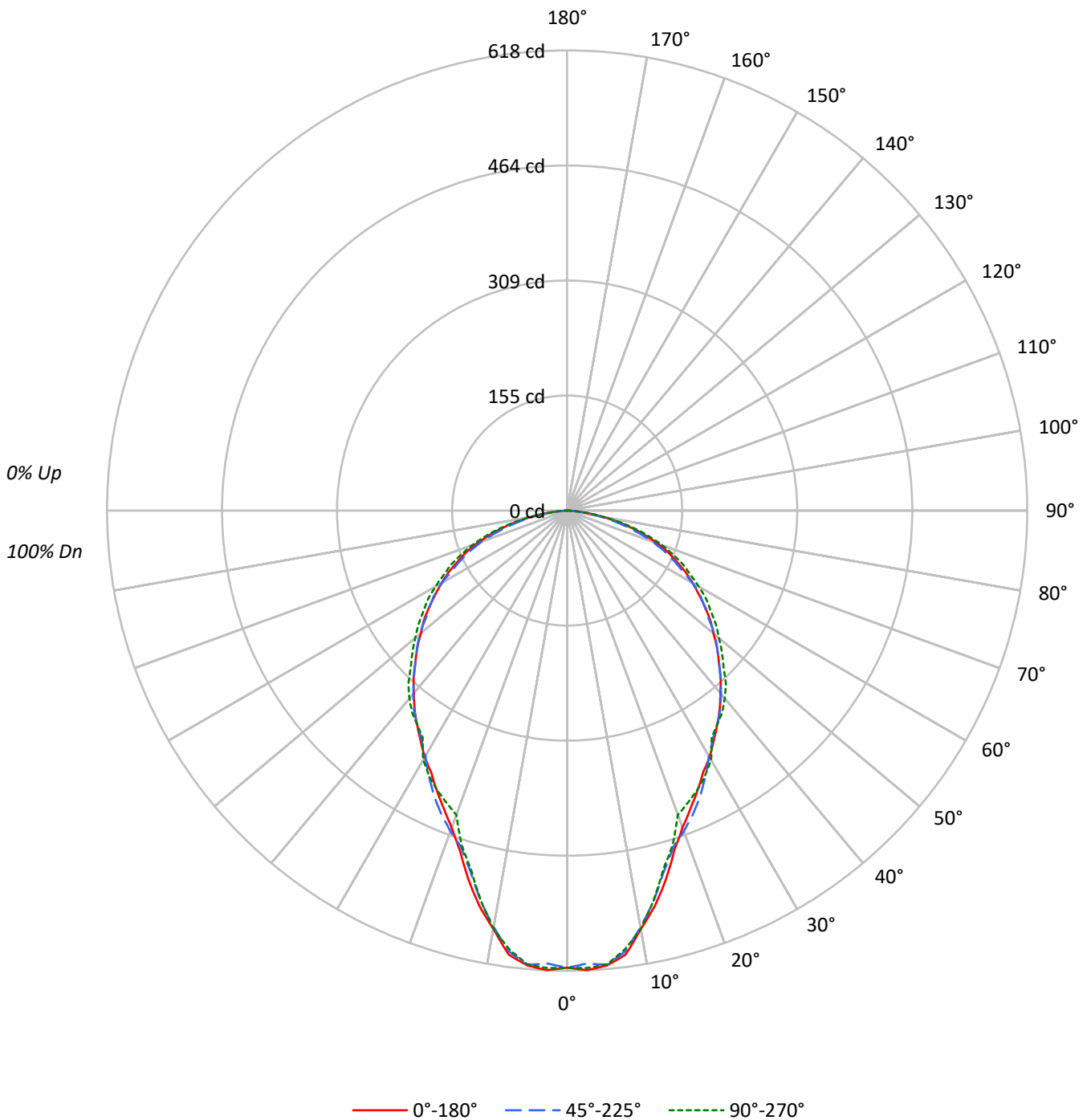
Lumens per Lamp: N/A  
Luminaire Lumens: 1312.9 lumens  
Efficiency: N/A  
Efficacy: 59.7 lumens/watt  
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 22  
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°	1652	1652	1652
5°	1657	1654	1652
10°	1559	1552	1558
15°	1428	1397	1389
20°	1297	1312	1245
25°	1230	1255	1228
30°	1189	1184	1201
35°	1154	1154	1154
40°	1125	1129	1157
45°	1097	1096	1130
50°	1073	1081	1114
55°	1062	1057	1105
60°	1048	1046	1100
65°	1035	1002	1094
70°	1015	957	1065
75°	939	849	986
80°	762	693	781
85°	482	432	423



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.0	4.3
10°-20°	142.5	10.9
20°-30°	192.5	14.7
30°-40°	220.5	16.8
40°-50°	225.8	17.2
50°-60°	204.9	15.6
60°-70°	159.9	12.2
70°-80°	90.7	6.9
80°-90°	19.0	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°	392.1	29.9
0°-40°	612.5	46.7
0°-60°	1043.3	79.5
0°-90°	1312.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1312.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	614	614	614	614	614	
5°	613	606	612	614	612	57
15°	513	514	502	504	499	143
25°	414	420	423	412	414	191
35°	351	352	351	352	351	220
45°	288	290	288	300	297	223
55°	226	226	225	233	236	202
65°	162	159	157	165	172	161
75°	90	84	82	86	95	95
85°	16	14	14	13	14	21
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	613.9	613.9	613.9	613.9	613.9
2.5°	617.7	612.9	608.8	615.5	614.9
5°	613.3	606.2	612.3	613.6	611.7
7.5°	601.5	597.0	597.3	594.7	594.4
10°	570.5	573.0	567.9	572.4	570.2
12.5°	544.0	545.6	536.6	538.6	536.0
15°	512.7	514.3	501.5	504.1	498.7
17.5°	478.5	484.3	473.8	476.9	471.2
20°	453.0	457.8	458.1	453.0	434.8
22.5°	432.9	437.7	441.5	426.2	424.3
25°	414.4	419.8	422.7	412.5	413.7
27.5°	395.9	401.9	401.9	404.2	401.3
30°	382.5	385.0	380.9	389.2	386.6
32.5°	366.5	367.4	363.9	370.0	361.1
35°	351.2	351.8	351.2	351.5	351.2
37.5°	336.5	334.9	337.8	335.8	341.9
40°	320.2	320.2	321.5	324.7	329.5
42.5°	305.2	306.5	304.9	313.8	315.7
45°	288.3	290.5	288.0	299.8	296.9
47.5°	273.0	273.9	273.3	281.3	281.9
50°	256.4	257.6	258.3	265.3	266.2
52.5°	242.6	242.3	240.1	250.3	251.9
55°	226.3	226.0	225.4	233.4	235.6
57.5°	209.7	210.1	211.7	216.1	221.6
60°	194.7	193.1	194.4	199.8	204.3
62.5°	179.4	176.5	173.7	182.6	186.8
65°	162.5	159.0	157.4	164.7	171.8
67.5°	146.9	141.1	140.1	145.3	153.6
70°	129.0	122.0	121.6	125.5	135.4
72.5°	109.2	103.1	101.5	106.6	115.6
75°	90.3	83.6	81.7	86.5	94.8
77.5°	69.9	64.5	63.2	65.8	72.5
80°	49.2	46.0	44.7	45.7	50.4
82.5°	31.0	28.7	28.1	27.8	30.3
85°	15.6	14.0	14.0	13.1	13.7
87.5°	4.8	4.5	4.2	3.2	3.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)