

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: P485702

Luminaire Tested: **ORLG-24-2-INS-89BC-LD4-3HI-30-120-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: P485702  
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-LD4-3HI-30-120-EDD-90  
Description: 2X2 ORL LED LUMINAIRE WITH 89BC LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

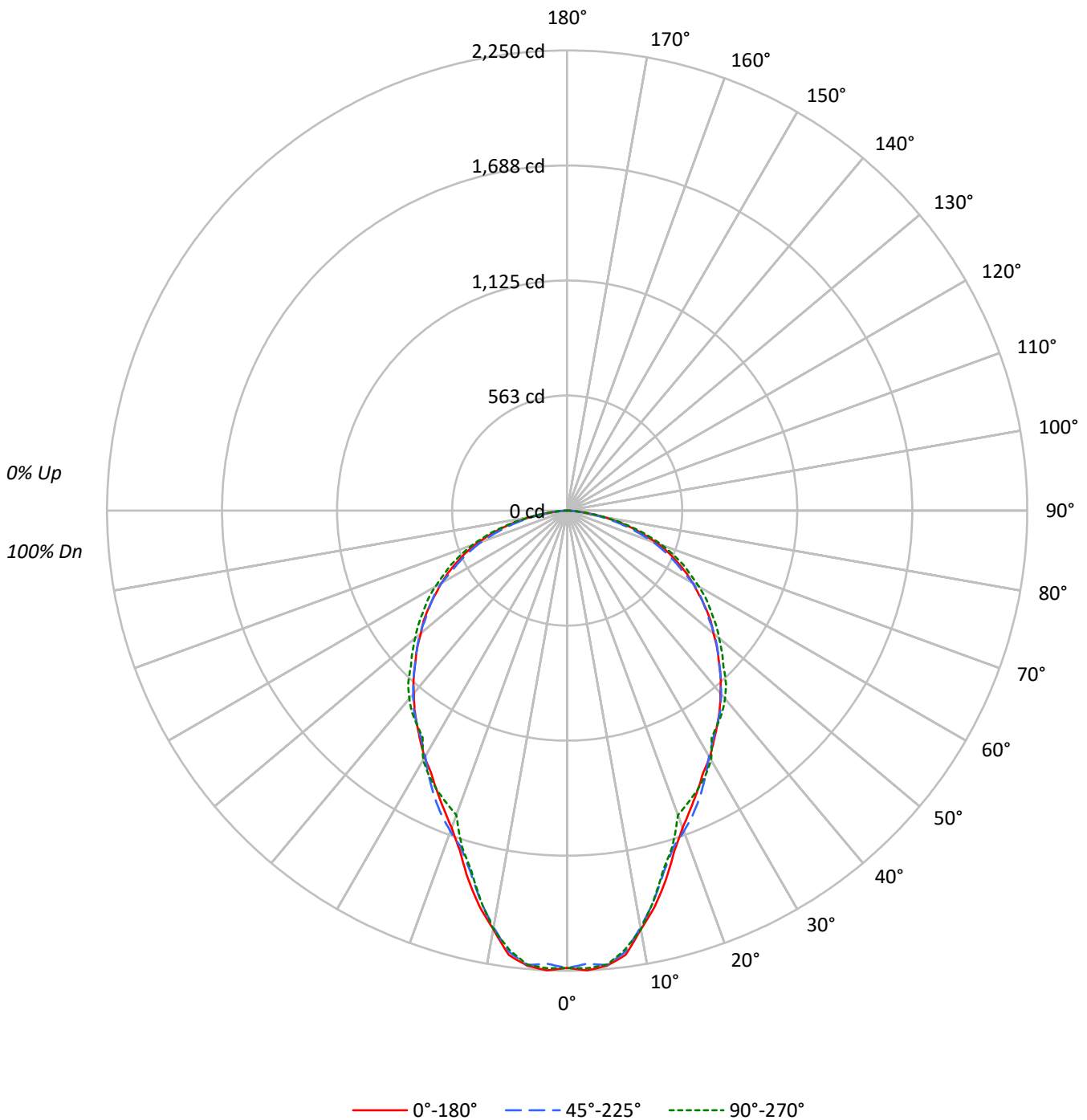
Lumens per Lamp: N/A  
Luminaire Lumens: 4782.9 lumens  
Efficiency: N/A  
Efficacy: 72.5 lumens/watt  
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 66  
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°	6018	6018	6018
5°	6035	6025	6019
10°	5679	5654	5676
15°	5204	5090	5061
20°	4726	4779	4536
25°	4482	4572	4475
30°	4329	4311	4376
35°	4203	4203	4203
40°	4098	4114	4216
45°	3997	3992	4116
50°	3910	3939	4060
55°	3869	3852	4027
60°	3818	3812	4006
65°	3769	3651	3984
70°	3697	3486	3880
75°	3422	3095	3591
80°	2775	2523	2848
85°	1760	1581	1544



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	207.7	4.3
10°-20°	519.3	10.9
20°-30°	701.3	14.7
30°-40°	803.1	16.8
40°-50°	822.6	17.2
50°-60°	746.4	15.6
60°-70°	582.6	12.2
70°-80°	330.4	6.9
80°-90°	69.4	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°	1428.3	29.9
0°-40°	2231.5	46.7
0°-60°	3800.6	79.5
0°-90°	4782.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4782.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2236	2236	2236	2236	2236	
5°	2234	2208	2231	2235	2228	209
15°	1868	1874	1827	1836	1817	522
25°	1510	1529	1540	1503	1507	697
35°	1279	1282	1279	1280	1279	801
45°	1050	1058	1049	1092	1082	812
55°	825	823	821	850	858	737
65°	592	579	573	600	626	587
75°	329	305	298	315	345	344
85°	57	51	51	48	50	75
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2236.4	2236.4	2236.4	2236.4	2236.4
2.5°	2250.4	2233.0	2217.8	2242.3	2239.9
5°	2234.1	2208.5	2230.6	2235.3	2228.3
7.5°	2191.1	2174.8	2176.0	2166.7	2165.5
10°	2078.3	2087.6	2069.0	2085.3	2077.1
12.5°	1981.7	1987.6	1955.0	1962.0	1952.7
15°	1867.8	1873.6	1827.1	1836.4	1816.6
17.5°	1743.3	1764.3	1725.9	1737.5	1716.6
20°	1650.3	1667.7	1668.9	1650.3	1584.0
22.5°	1577.0	1594.5	1608.4	1552.6	1545.6
25°	1509.6	1529.3	1539.8	1502.6	1507.2
27.5°	1442.1	1464.2	1464.2	1472.4	1461.9
30°	1393.3	1402.6	1387.5	1417.7	1408.4
32.5°	1335.1	1338.6	1325.8	1347.9	1315.4
35°	1279.3	1281.6	1279.3	1280.5	1279.3
37.5°	1225.8	1220.0	1230.5	1223.5	1245.6
40°	1166.5	1166.5	1171.1	1182.8	1200.2
42.5°	1111.8	1116.5	1110.7	1143.2	1150.2
45°	1050.2	1058.3	1049.0	1092.1	1081.6
47.5°	994.4	997.9	995.5	1024.6	1026.9
50°	933.9	938.5	940.9	966.5	969.9
52.5°	883.9	882.7	874.6	911.8	917.6
55°	824.6	823.4	821.1	850.2	858.3
57.5°	764.1	765.3	771.1	787.3	807.1
60°	709.4	703.6	708.3	728.0	744.3
62.5°	653.6	643.1	632.7	665.2	680.4
65°	592.0	579.2	573.4	600.1	625.7
67.5°	535.0	514.0	510.6	529.2	559.4
70°	469.9	444.3	443.1	457.1	493.1
72.5°	397.7	375.6	369.8	388.4	421.0
75°	329.1	304.7	297.7	315.2	345.4
77.5°	254.7	234.9	230.3	239.6	264.0
80°	179.1	167.5	162.8	166.3	183.8
82.5°	112.8	104.7	102.3	101.2	110.5
85°	57.0	51.2	51.2	47.7	50.0
87.5°	17.4	16.3	15.1	11.6	12.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)