

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: P485628

Luminaire Tested: **ORLG-24-2-INS-89BC-LD4-1HI-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: P485628
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-27-120-EDD-90
Description: 2X2 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

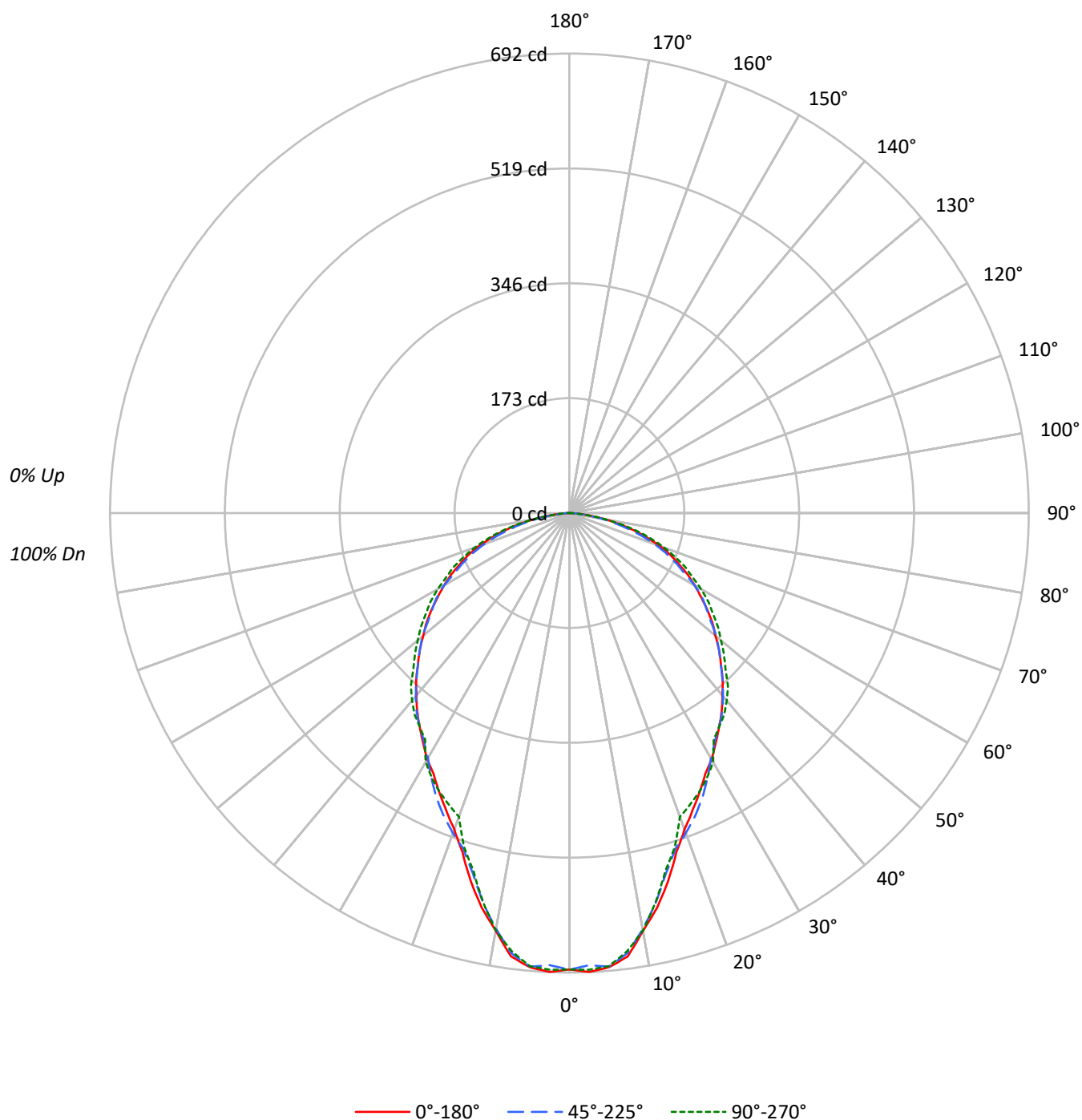
Lumens per Lamp: N/A
Luminaire Lumens: 1469.8 lumens
Efficiency: N/A
Efficacy: 66.8 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	1850	1850	1850
5°	1855	1852	1850
10°	1745	1737	1744
15°	1599	1564	1555
20°	1452	1469	1394
25°	1377	1405	1375
30°	1331	1325	1345
35°	1291	1291	1291
40°	1259	1264	1296
45°	1228	1227	1265
50°	1202	1210	1248
55°	1189	1184	1238
60°	1173	1172	1231
65°	1158	1122	1224
70°	1136	1072	1192
75°	1051	951	1103
80°	852	775	876
85°	540	485	475



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.8	4.3
10°-20°	159.6	10.9
20°-30°	215.5	14.7
30°-40°	246.8	16.8
40°-50°	252.8	17.2
50°-60°	229.4	15.6
60°-70°	179.0	12.2
70°-80°	101.5	6.9
80°-90°	21.3	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°	438.9	29.9
0°-40°	685.7	46.7
0°-60°	1167.9	79.5
0°-90°	1469.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1469.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	687	687	687	687	687	
5°	687	679	686	687	685	64
15°	574	576	562	564	558	160
25°	464	470	473	462	463	214
35°	393	394	393	394	393	246
45°	323	325	322	336	332	250
55°	253	253	252	261	264	226
65°	182	178	176	184	192	180
75°	101	94	92	97	106	106
85°	18	16	16	15	15	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	687.3	687.3	687.3	687.3	687.3
2.5°	691.6	686.2	681.5	689.1	688.3
5°	686.6	678.7	685.5	686.9	684.8
7.5°	673.3	668.3	668.7	665.8	665.5
10°	638.7	641.5	635.8	640.8	638.3
12.5°	609.0	610.8	600.8	602.9	600.1
15°	574.0	575.8	561.5	564.3	558.2
17.5°	535.7	542.2	530.4	533.9	527.5
20°	507.1	512.5	512.9	507.1	486.8
22.5°	484.6	490.0	494.3	477.1	475.0
25°	463.9	470.0	473.2	461.8	463.2
27.5°	443.2	450.0	450.0	452.5	449.2
30°	428.2	431.0	426.4	435.7	432.8
32.5°	410.3	411.4	407.4	414.2	404.2
35°	393.1	393.8	393.1	393.5	393.1
37.5°	376.7	374.9	378.1	376.0	382.8
40°	358.5	358.5	359.9	363.5	368.8
42.5°	341.7	343.1	341.3	351.3	353.5
45°	322.7	325.2	322.4	335.6	332.4
47.5°	305.6	306.6	305.9	314.9	315.6
50°	287.0	288.4	289.1	297.0	298.1
52.5°	271.6	271.3	268.8	280.2	282.0
55°	253.4	253.0	252.3	261.3	263.8
57.5°	234.8	235.2	237.0	242.0	248.0
60°	218.0	216.2	217.7	223.7	228.7
62.5°	200.9	197.6	194.4	204.4	209.1
65°	181.9	178.0	176.2	184.4	192.3
67.5°	164.4	158.0	156.9	162.6	171.9
70°	144.4	136.5	136.2	140.5	151.5
72.5°	122.2	115.4	113.7	119.4	129.4
75°	101.1	93.6	91.5	96.9	106.1
77.5°	78.3	72.2	70.8	73.6	81.1
80°	55.0	51.5	50.0	51.1	56.5
82.5°	34.7	32.2	31.5	31.1	34.0
85°	17.5	15.7	15.7	14.7	15.4
87.5°	5.4	5.0	4.6	3.6	3.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)