

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: P485683

Luminaire Tested: **ORLG-24-2-INS-89BC-LD4-2LO-40-120-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: P485683
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-LD4-2LO-40-120-EDD
Description: 2X2 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

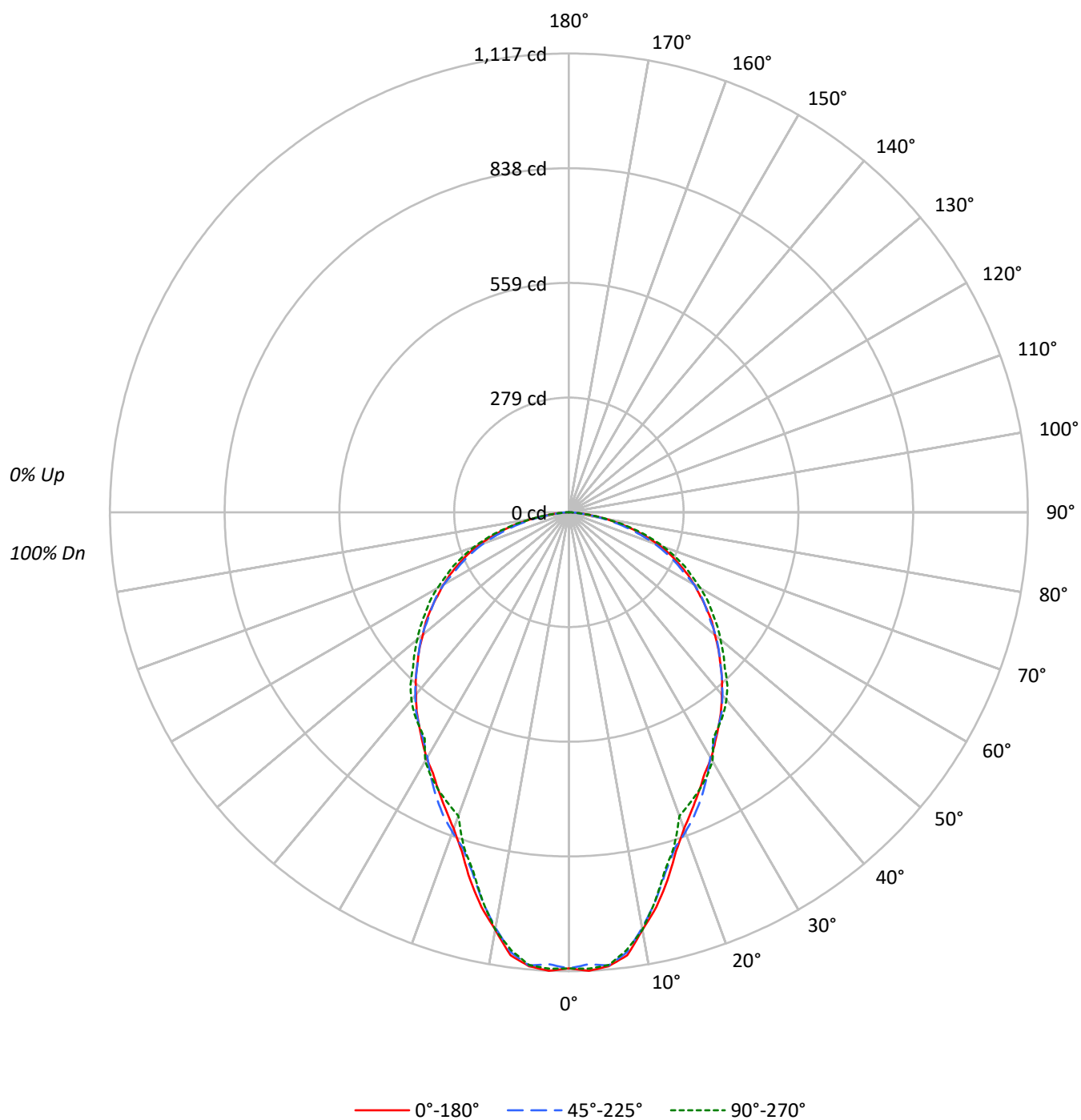
Lumens per Lamp: N/A
Luminaire Lumens: 2374.4 lumens
Efficiency: N/A
Efficacy: 101.5 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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			
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°	2988	2988	2988
5°	2996	2991	2988
10°	2819	2807	2818
15°	2583	2527	2512
20°	2346	2373	2252
25°	2225	2270	2222
30°	2149	2140	2173
35°	2086	2086	2086
40°	2034	2042	2093
45°	1984	1982	2043
50°	1941	1955	2016
55°	1920	1912	1999
60°	1896	1892	1989
65°	1871	1812	1978
70°	1836	1731	1926
75°	1699	1537	1783
80°	1378	1252	1413
85°	874	784	766



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.1	4.3
10°-20°	257.8	10.9
20°-30°	348.2	14.7
30°-40°	398.7	16.8
40°-50°	408.4	17.2
50°-60°	370.6	15.6
60°-70°	289.2	12.2
70°-80°	164.0	6.9
80°-90°	34.4	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°	709.1	29.9
0°-40°	1107.8	46.7
0°-60°	1886.7	79.5
0°-90°	2374.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2374.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1110	1110	1110	1110	1110	
5°	1109	1096	1107	1110	1106	104
15°	927	930	907	912	902	259
25°	749	759	764	746	748	346
35°	635	636	635	636	635	398
45°	521	525	521	542	537	403
55°	409	409	408	422	426	366
65°	294	288	285	298	311	291
75°	163	151	148	156	172	171
85°	28	25	25	24	25	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1110.2	1110.2	1110.2	1110.2	1110.2
2.5°	1117.2	1108.5	1101.0	1113.1	1112.0
5°	1109.1	1096.4	1107.4	1109.7	1106.2
7.5°	1087.7	1079.7	1080.2	1075.6	1075.0
10°	1031.7	1036.3	1027.1	1035.2	1031.2
12.5°	983.8	986.7	970.5	974.0	969.4
15°	927.2	930.1	907.0	911.6	901.8
17.5°	865.5	875.8	856.8	862.6	852.2
20°	819.3	827.9	828.5	819.3	786.4
22.5°	782.9	791.6	798.5	770.8	767.3
25°	749.4	759.2	764.4	745.9	748.2
27.5°	715.9	726.9	726.9	730.9	725.7
30°	691.7	696.3	688.8	703.8	699.2
32.5°	662.8	664.5	658.2	669.2	653.0
35°	635.1	636.2	635.1	635.7	635.1
37.5°	608.5	605.6	610.8	607.4	618.3
40°	579.1	579.1	581.4	587.2	595.8
42.5°	551.9	554.3	551.4	567.5	571.0
45°	521.3	525.4	520.8	542.1	536.9
47.5°	493.6	495.4	494.2	508.6	509.8
50°	463.6	465.9	467.1	479.8	481.5
52.5°	438.8	438.2	434.2	452.6	455.5
55°	409.3	408.8	407.6	422.0	426.1
57.5°	379.3	379.9	382.8	390.9	400.7
60°	352.2	349.3	351.6	361.4	369.5
62.5°	324.5	319.3	314.1	330.2	337.8
65°	293.9	287.5	284.6	297.9	310.6
67.5°	265.6	255.2	253.5	262.7	277.7
70°	233.3	220.5	220.0	226.9	244.8
72.5°	197.5	186.5	183.6	192.8	209.0
75°	163.4	151.3	147.8	156.5	171.5
77.5°	126.4	116.6	114.3	118.9	131.1
80°	88.9	83.1	80.8	82.6	91.2
82.5°	56.0	52.0	50.8	50.2	54.8
85°	28.3	25.4	25.4	23.7	24.8
87.5°	8.7	8.1	7.5	5.8	6.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)