

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: P487011

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-3LO-30-120-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: P487011
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-LD4-3LO-30-120-EDD
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

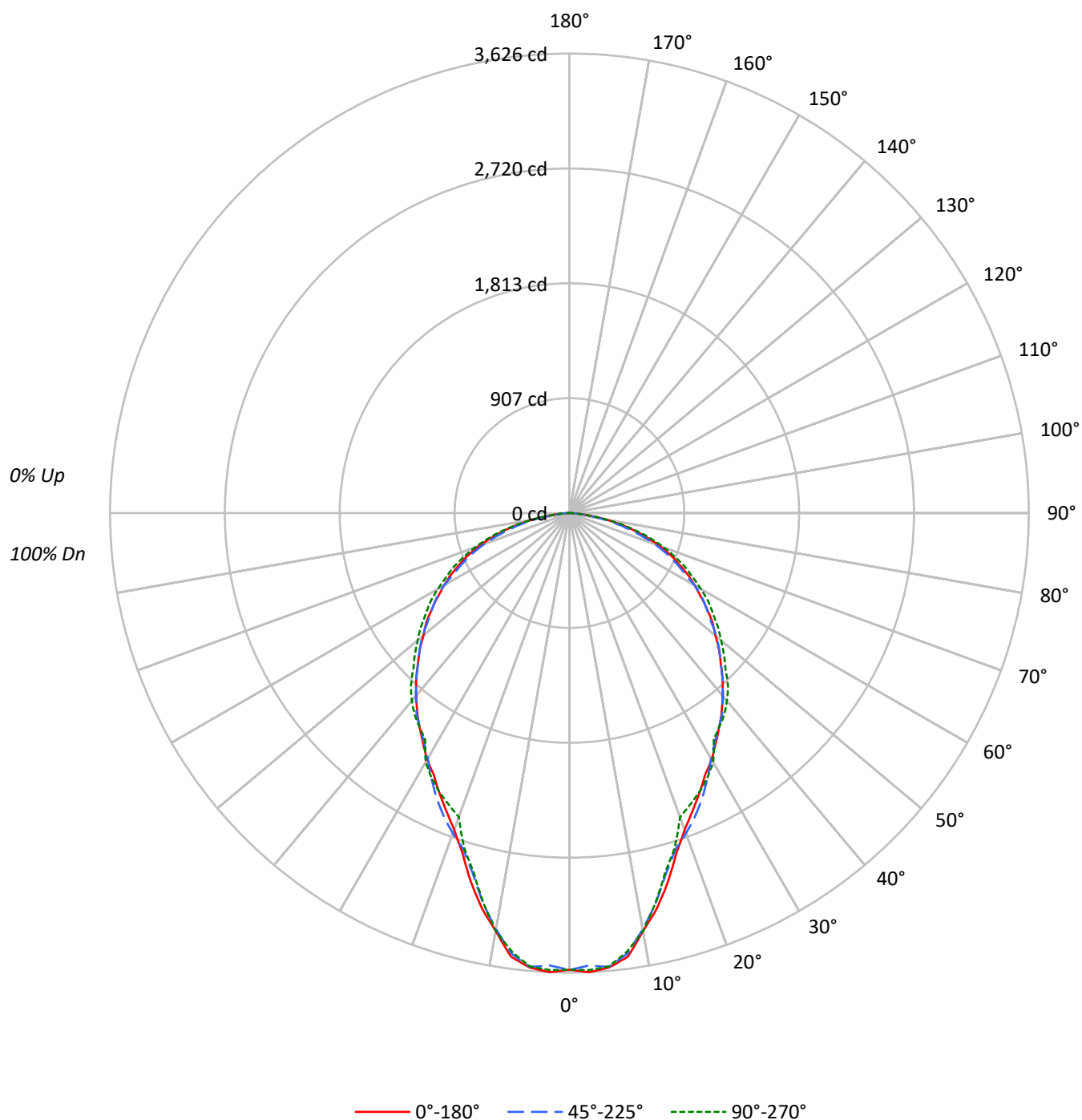
Lumens per Lamp: N/A
Luminaire Lumens: 7706.5 lumens
Efficiency: N/A
Efficacy: 109.8 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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					0
RW	70	50	30	10	70	50	30	10		50	30	10		50	30	10		50	30	10
RCR																				
0	119	119	119	119	116	116	116	116		111	111	111		106	106	106		102	102	102
1	109	104	100	96	106	102	98	95		98	95	92		94	91	89		90	88	86
2	99	91	84	79	97	89	83	78		86	81	76		82	78	74		79	76	73
3	91	80	72	66	88	79	71	65		76	69	64		73	67	63		70	66	62
4	83	71	63	56	81	70	62	56		67	60	55		65	59	54		63	58	53
5	77	64	55	48	75	63	54	48		61	53	48		59	52	47		57	51	47
6	71	58	49	43	69	57	48	42		55	48	42		53	47	42		52	46	41
7	66	53	44	38	64	52	44	38		50	43	37		49	42	37		47	41	37
8	61	48	40	34	60	47	39	34		46	39	34		45	38	33		44	38	33
9	58	44	36	31	56	44	36	31		43	35	30		41	35	30		40	35	30
10	54	41	33	28	53	40	33	28		40	33	28		39	32	28		38	32	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4848	4848	4848
5°	4862	4854	4849
10°	4575	4555	4573
15°	4192	4101	4077
20°	3807	3850	3654
25°	3611	3683	3605
30°	3488	3473	3526
35°	3386	3386	3386
40°	3301	3314	3397
45°	3220	3216	3316
50°	3150	3173	3271
55°	3117	3103	3244
60°	3076	3071	3227
65°	3037	2941	3210
70°	2978	2809	3126
75°	2757	2494	2893
80°	2236	2032	2294
85°	1417	1274	1244



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	334.7	4.3
10°-20°	836.7	10.9
20°-30°	1130.0	14.7
30°-40°	1294.0	16.8
40°-50°	1325.5	17.2
50°-60°	1202.7	15.6
60°-70°	938.7	12.2
70°-80°	532.4	6.9
80°-90°	111.8	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°	2301.4	29.9
0°-40°	3595.5	46.7
0°-60°	6123.7	79.5
0°-90°	7706.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7706.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3604	3604	3604	3604	3604	
5°	3600	3558	3594	3602	3590	336
15°	3010	3019	2944	2959	2927	841
25°	2432	2464	2481	2421	2429	1122
35°	2061	2065	2061	2063	2061	1291
45°	1692	1705	1690	1760	1743	1308
55°	1329	1327	1323	1370	1383	1187
65°	954	933	924	967	1008	945
75°	530	491	480	508	556	555
85°	92	82	82	77	81	121
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3603.5	3603.5	3603.5	3603.5	3603.5
2.5°	3626.0	3597.9	3573.5	3612.9	3609.1
5°	3599.7	3558.5	3594.1	3601.6	3590.4
7.5°	3530.4	3504.2	3506.1	3491.1	3489.2
10°	3348.6	3363.6	3333.7	3359.9	3346.8
12.5°	3193.1	3202.5	3150.0	3161.3	3146.3
15°	3009.5	3018.8	2943.9	2958.9	2927.0
17.5°	2809.0	2842.7	2780.9	2799.6	2765.9
20°	2659.1	2687.2	2689.0	2659.1	2552.2
22.5°	2541.0	2569.1	2591.6	2501.6	2490.4
25°	2432.3	2464.2	2481.0	2421.1	2428.6
27.5°	2323.6	2359.2	2359.2	2372.3	2355.5
30°	2244.9	2259.9	2235.6	2284.3	2269.3
32.5°	2151.2	2156.9	2136.2	2171.8	2119.4
35°	2061.3	2065.0	2061.3	2063.2	2061.3
37.5°	1975.1	1965.7	1982.6	1971.3	2006.9
40°	1879.5	1879.5	1887.0	1905.7	1933.9
42.5°	1791.4	1798.9	1789.6	1842.0	1853.3
45°	1692.1	1705.2	1690.3	1759.6	1742.7
47.5°	1602.2	1607.8	1604.1	1650.9	1654.6
50°	1504.7	1512.2	1516.0	1557.2	1562.8
52.5°	1424.2	1422.3	1409.2	1469.1	1478.5
55°	1328.6	1326.7	1323.0	1369.8	1382.9
57.5°	1231.1	1233.0	1242.4	1268.6	1300.5
60°	1143.1	1133.7	1141.2	1173.1	1199.3
62.5°	1053.1	1036.3	1019.4	1071.9	1096.2
65°	953.8	933.2	923.8	966.9	1008.2
67.5°	862.0	828.3	822.6	852.6	901.3
70°	757.1	715.8	714.0	736.4	794.5
72.5°	640.9	605.3	595.9	625.9	678.3
75°	530.3	491.0	479.7	507.8	556.5
77.5°	410.4	378.5	371.0	386.0	425.4
80°	288.6	269.8	262.3	268.0	296.1
82.5°	181.8	168.7	164.9	163.0	178.0
85°	91.8	82.5	82.5	76.8	80.6
87.5°	28.1	26.2	24.4	18.7	20.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)