

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: P487074

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-5HI-40-120-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: P487074
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-LD4-5HI-40-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

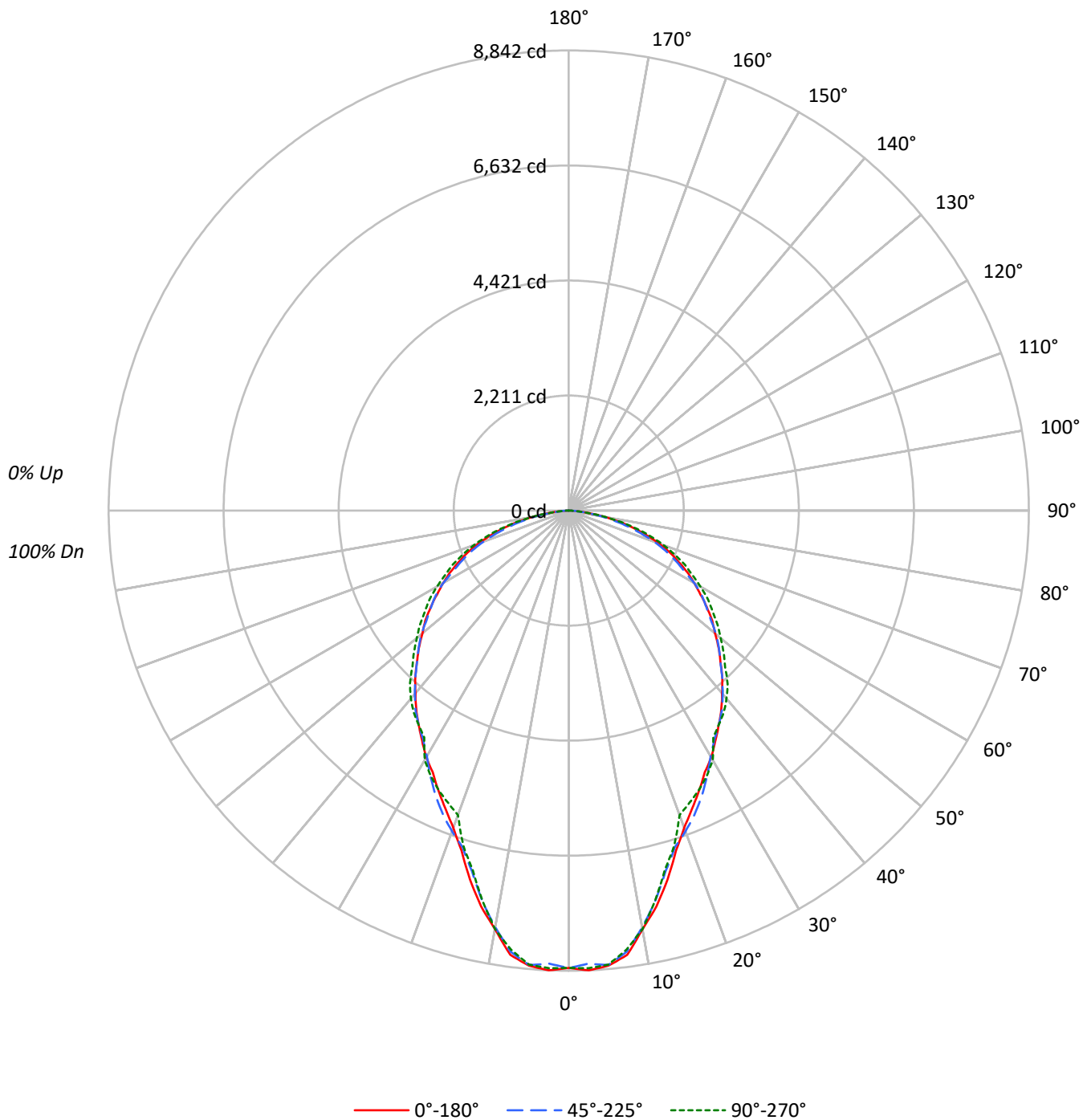
Lumens per Lamp: N/A
Luminaire Lumens: 18791.7 lumens
Efficiency: N/A
Efficacy: 85.4 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 220
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°	11823	11823	11823
5°	11855	11837	11825
10°	11156	11106	11150
15°	10222	9999	9942
20°	9284	9389	8911
25°	8805	8981	8792
30°	8505	8469	8597
35°	8256	8256	8256
40°	8050	8082	8283
45°	7851	7842	8086
50°	7680	7738	7977
55°	7600	7568	7910
60°	7501	7488	7869
65°	7405	7172	7826
70°	7262	6849	7622
75°	6722	6081	7055
80°	5453	4957	5594
85°	3457	3105	3034



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	816.1	4.3
10°-20°	2040.3	10.9
20°-30°	2755.4	14.7
30°-40°	3155.4	16.8
40°-50°	3232.1	17.2
50°-60°	2932.7	15.6
60°-70°	2288.9	12.2
70°-80°	1298.2	6.9
80°-90°	272.5	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°	5611.9	29.9
0°-40°	8767.2	46.7
0°-60°	14932.1	79.5
0°-90°	18791.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18791.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8787	8787	8787	8787	8787	
5°	8778	8677	8764	8782	8755	820
15°	7338	7361	7178	7215	7137	2051
25°	5931	6009	6050	5904	5922	2737
35°	5026	5035	5026	5031	5026	3149
45°	4126	4158	4122	4291	4250	3190
55°	3240	3235	3226	3340	3372	2895
65°	2326	2276	2253	2358	2458	2305
75°	1293	1197	1170	1238	1357	1353
85°	224	201	201	187	196	296
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8786.8	8786.8	8786.8	8786.8	8786.8
2.5°	8841.7	8773.1	8713.7	8809.7	8800.6
5°	8777.7	8677.2	8764.0	8782.3	8754.9
7.5°	8608.6	8544.7	8549.2	8512.7	8508.1
10°	8165.4	8202.0	8128.9	8192.8	8160.8
12.5°	7786.2	7809.0	7681.1	7708.5	7671.9
15°	7338.4	7361.2	7178.4	7215.0	7137.3
17.5°	6849.4	6931.7	6780.9	6826.6	6744.3
20°	6483.9	6552.4	6557.0	6483.9	6223.4
22.5°	6196.0	6264.6	6319.4	6100.1	6072.7
25°	5931.0	6008.7	6049.8	5903.6	5921.9
27.5°	5666.0	5752.8	5752.8	5784.8	5743.7
30°	5474.1	5510.6	5451.2	5570.0	5533.5
32.5°	5245.6	5259.3	5209.0	5295.9	5167.9
35°	5026.3	5035.4	5026.3	5030.8	5026.3
37.5°	4816.1	4793.2	4834.4	4806.9	4893.8
40°	4583.0	4583.0	4601.3	4647.0	4715.6
42.5°	4368.3	4386.6	4363.7	4491.7	4519.1
45°	4126.1	4158.1	4121.5	4290.6	4249.5
47.5°	3906.8	3920.5	3911.4	4025.6	4034.7
50°	3669.2	3687.5	3696.6	3797.1	3810.8
52.5°	3472.7	3468.1	3436.1	3582.4	3605.2
55°	3239.7	3235.1	3226.0	3340.2	3372.2
57.5°	3002.1	3006.6	3029.5	3093.4	3171.1
60°	2787.3	2764.5	2782.7	2860.4	2924.4
62.5°	2568.0	2526.8	2485.7	2613.7	2673.1
65°	2325.8	2275.5	2252.7	2357.8	2458.3
67.5°	2101.9	2019.6	2005.9	2079.1	2197.9
70°	1846.0	1745.5	1740.9	1795.8	1937.4
72.5°	1562.7	1475.9	1453.1	1526.2	1654.1
75°	1293.1	1197.2	1169.8	1238.3	1357.1
77.5°	1000.7	923.0	904.7	941.3	1037.2
80°	703.7	658.0	639.7	653.4	722.0
82.5°	443.2	411.2	402.1	397.5	434.1
85°	223.9	201.1	201.1	187.3	196.5
87.5°	68.5	64.0	59.4	45.7	50.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)