

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: P487100

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-5STD-50-120-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: P487100
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-LD4-5STD-50-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

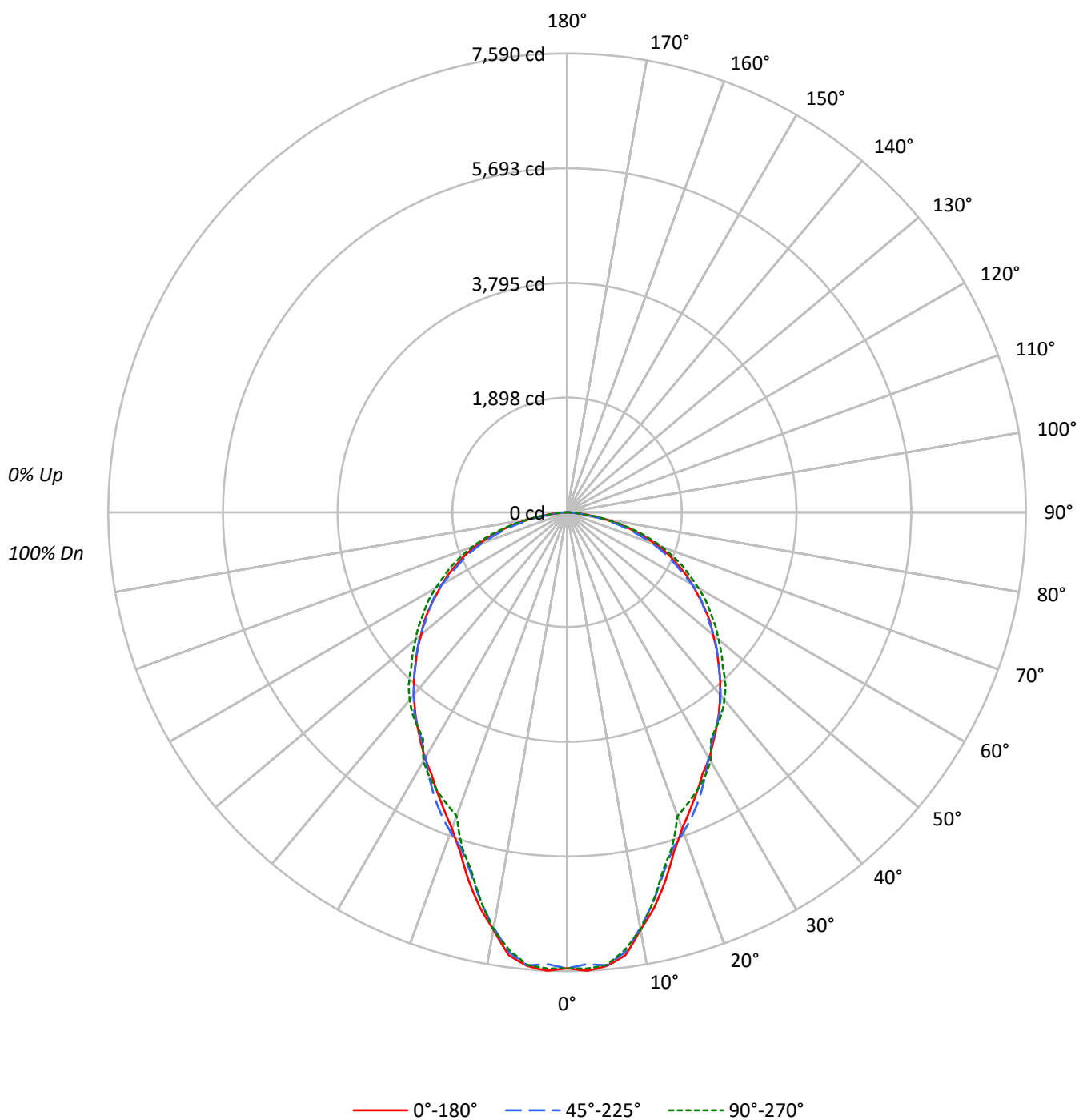
Lumens per Lamp: N/A
Luminaire Lumens: 16132.4 lumens
Efficiency: N/A
Efficacy: 96.9 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 166.5
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°	10150	10150	10150
5°	10178	10162	10151
10°	9577	9534	9572
15°	8775	8584	8535
20°	7970	8060	7650
25°	7559	7710	7547
30°	7301	7271	7380
35°	7088	7088	7088
40°	6911	6938	7110
45°	6740	6733	6942
50°	6593	6643	6848
55°	6524	6496	6791
60°	6439	6428	6756
65°	6357	6157	6719
70°	6235	5880	6543
75°	5771	5220	6056
80°	4681	4255	4802
85°	2967	2665	2604



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	700.6	4.3
10°-20°	1751.6	10.9
20°-30°	2365.5	14.7
30°-40°	2708.8	16.8
40°-50°	2774.7	17.2
50°-60°	2517.7	15.6
60°-70°	1965.0	12.2
70°-80°	1114.5	6.9
80°-90°	233.9	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°	4817.7	29.9
0°-40°	7526.5	46.7
0°-60°	12819.0	79.5
0°-90°	16132.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16132.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7543	7543	7543	7543	7543	
5°	7536	7449	7524	7540	7516	704
15°	6300	6320	6163	6194	6127	1761
25°	5092	5158	5194	5068	5084	2350
35°	4315	4323	4315	4319	4315	2703
45°	3542	3570	3538	3683	3648	2739
55°	2781	2777	2769	2868	2895	2485
65°	1997	1954	1934	2024	2110	1979
75°	1110	1028	1004	1063	1165	1161
85°	192	173	173	161	169	254
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7543.4	7543.4	7543.4	7543.4	7543.4
2.5°	7590.5	7531.6	7480.6	7563.0	7555.1
5°	7535.5	7449.2	7523.8	7539.5	7515.9
7.5°	7390.4	7335.5	7339.4	7308.0	7304.1
10°	7009.9	7041.3	6978.5	7033.4	7006.0
12.5°	6684.3	6703.9	6594.1	6617.6	6586.2
15°	6299.9	6319.5	6162.6	6194.0	6127.3
17.5°	5880.1	5950.8	5821.3	5860.5	5789.9
20°	5566.3	5625.2	5629.1	5566.3	5342.7
22.5°	5319.2	5378.0	5425.1	5236.8	5213.3
25°	5091.7	5158.4	5193.7	5068.1	5083.8
27.5°	4864.2	4938.7	4938.7	4966.2	4930.9
30°	4699.4	4730.8	4679.8	4781.8	4750.4
32.5°	4503.3	4515.0	4471.9	4546.4	4436.6
35°	4315.0	4322.8	4315.0	4318.9	4315.0
37.5°	4134.5	4114.9	4150.2	4126.7	4201.2
40°	3934.5	3934.5	3950.2	3989.4	4048.2
42.5°	3750.1	3765.8	3746.2	3856.0	3879.6
45°	3542.2	3569.7	3538.3	3683.4	3648.1
47.5°	3353.9	3365.7	3357.8	3455.9	3463.8
50°	3149.9	3165.6	3173.5	3259.8	3271.5
52.5°	2981.3	2977.3	2949.9	3075.4	3095.0
55°	2781.2	2777.3	2769.4	2867.5	2895.0
57.5°	2577.2	2581.1	2600.8	2655.7	2722.4
60°	2392.9	2373.2	2388.9	2455.6	2510.5
62.5°	2204.6	2169.3	2134.0	2243.8	2294.8
65°	1996.7	1953.5	1933.9	2024.1	2110.4
67.5°	1804.4	1733.8	1722.1	1784.8	1886.8
70°	1584.8	1498.5	1494.6	1541.6	1663.2
72.5°	1341.6	1267.0	1247.4	1310.2	1420.0
75°	1110.1	1027.8	1004.2	1063.1	1165.0
77.5°	859.1	792.4	776.7	808.1	890.5
80°	604.1	564.9	549.2	560.9	619.8
82.5°	380.5	353.0	345.2	341.3	372.7
85°	192.2	172.6	172.6	160.8	168.7
87.5°	58.8	54.9	51.0	39.2	43.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)