

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: P487035

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-4HI-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: P487035  
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-LD4-4HI-30-120-EDD  
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

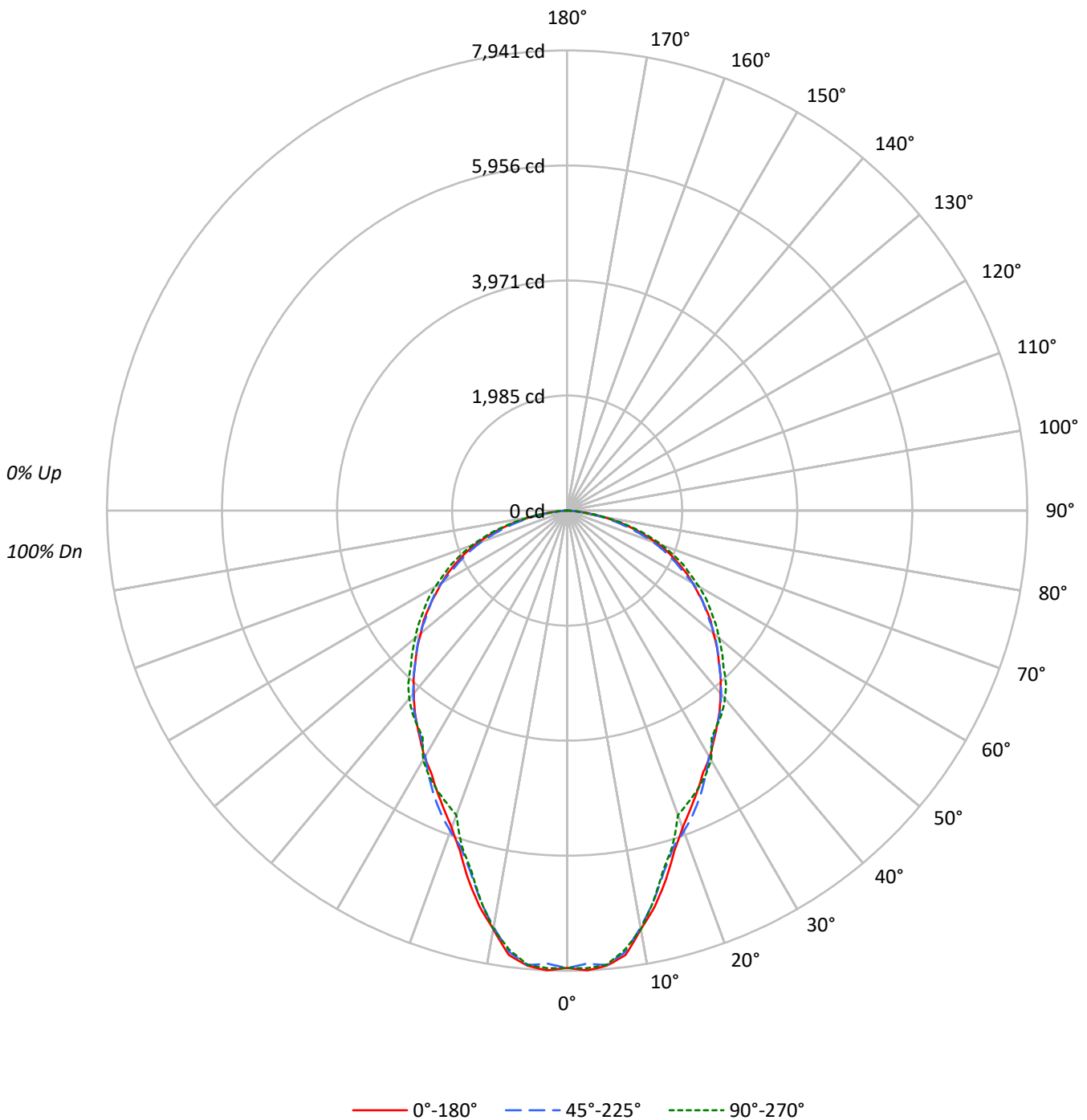
Lumens per Lamp: N/A  
Luminaire Lumens: 16878.0 lumens  
Efficiency: N/A  
Efficacy: 95.9 lumens/watt  
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 176  
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°	10619	10619	10619
5°	10648	10631	10620
10°	10020	9975	10014
15°	9181	8981	8930
20°	8338	8433	8004
25°	7908	8067	7896
30°	7639	7607	7722
35°	7415	7415	7415
40°	7230	7259	7439
45°	7052	7044	7262
50°	6898	6950	7164
55°	6826	6797	7105
60°	6737	6726	7068
65°	6650	6442	7030
70°	6522	6151	6845
75°	6038	5462	6337
80°	4897	4452	5024
85°	3105	2788	2725



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	733.0	4.3
10°-20°	1832.5	10.9
20°-30°	2474.8	14.7
30°-40°	2834.0	16.8
40°-50°	2903.0	17.2
50°-60°	2634.0	15.6
60°-70°	2055.8	12.2
70°-80°	1166.0	6.9
80°-90°	244.8	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°	5040.4	29.9
0°-40°	7874.4	46.7
0°-60°	13411.4	79.5
0°-90°	16878.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16878.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	7892	7892	7892	7892	7892	
5°	7884	7794	7872	7888	7863	736
15°	6591	6612	6447	6480	6410	1842
25°	5327	5397	5434	5302	5319	2458
35°	4514	4523	4514	4518	4514	2828
45°	3706	3735	3702	3854	3817	2865
55°	2910	2906	2897	3000	3029	2600
65°	2089	2044	2023	2118	2208	2070
75°	1161	1075	1051	1112	1219	1215
85°	201	181	181	168	176	266
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	7892.0	7892.0	7892.0	7892.0	7892.0
2.5°	7941.3	7879.7	7826.3	7912.5	7904.3
5°	7883.8	7793.5	7871.5	7887.9	7863.3
7.5°	7732.0	7674.5	7678.6	7645.8	7641.7
10°	7333.9	7366.7	7301.0	7358.5	7329.8
12.5°	6993.2	7013.8	6898.8	6923.5	6890.6
15°	6591.0	6611.6	6447.4	6480.2	6410.5
17.5°	6151.9	6225.8	6090.4	6131.4	6057.5
20°	5823.6	5885.2	5889.3	5823.6	5589.7
22.5°	5565.0	5626.6	5675.8	5478.9	5454.2
25°	5327.0	5396.8	5433.7	5302.4	5318.8
27.5°	5089.0	5167.0	5167.0	5195.7	5158.7
30°	4916.6	4949.4	4896.1	5002.8	4970.0
32.5°	4711.4	4723.7	4678.6	4756.5	4641.6
35°	4514.4	4522.6	4514.4	4518.5	4514.4
37.5°	4325.6	4305.1	4342.0	4317.4	4395.4
40°	4116.3	4116.3	4132.7	4173.8	4235.3
42.5°	3923.4	3939.9	3919.3	4034.2	4058.9
45°	3705.9	3734.7	3701.8	3853.7	3816.7
47.5°	3508.9	3521.2	3513.0	3615.6	3623.8
50°	3295.5	3311.9	3320.1	3410.4	3422.7
52.5°	3119.0	3114.9	3086.2	3217.5	3238.1
55°	2909.7	2905.6	2897.4	3000.0	3028.8
57.5°	2696.3	2700.4	2721.0	2778.4	2848.2
60°	2503.4	2482.9	2499.3	2569.1	2626.6
62.5°	2306.5	2269.5	2232.6	2347.5	2400.8
65°	2088.9	2043.8	2023.3	2117.7	2208.0
67.5°	1887.8	1814.0	1801.7	1867.3	1974.0
70°	1658.0	1567.7	1563.6	1612.9	1740.1
72.5°	1403.6	1325.6	1305.1	1370.7	1485.7
75°	1161.4	1075.3	1050.6	1112.2	1218.9
77.5°	898.8	829.0	812.6	845.4	931.6
80°	632.0	591.0	574.6	586.9	648.4
82.5°	398.1	369.4	361.2	357.0	389.9
85°	201.1	180.6	180.6	168.3	176.5
87.5°	61.6	57.5	53.4	41.0	45.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)