

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: P487050

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-4LO-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: P487050
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-LD4-4LO-40-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

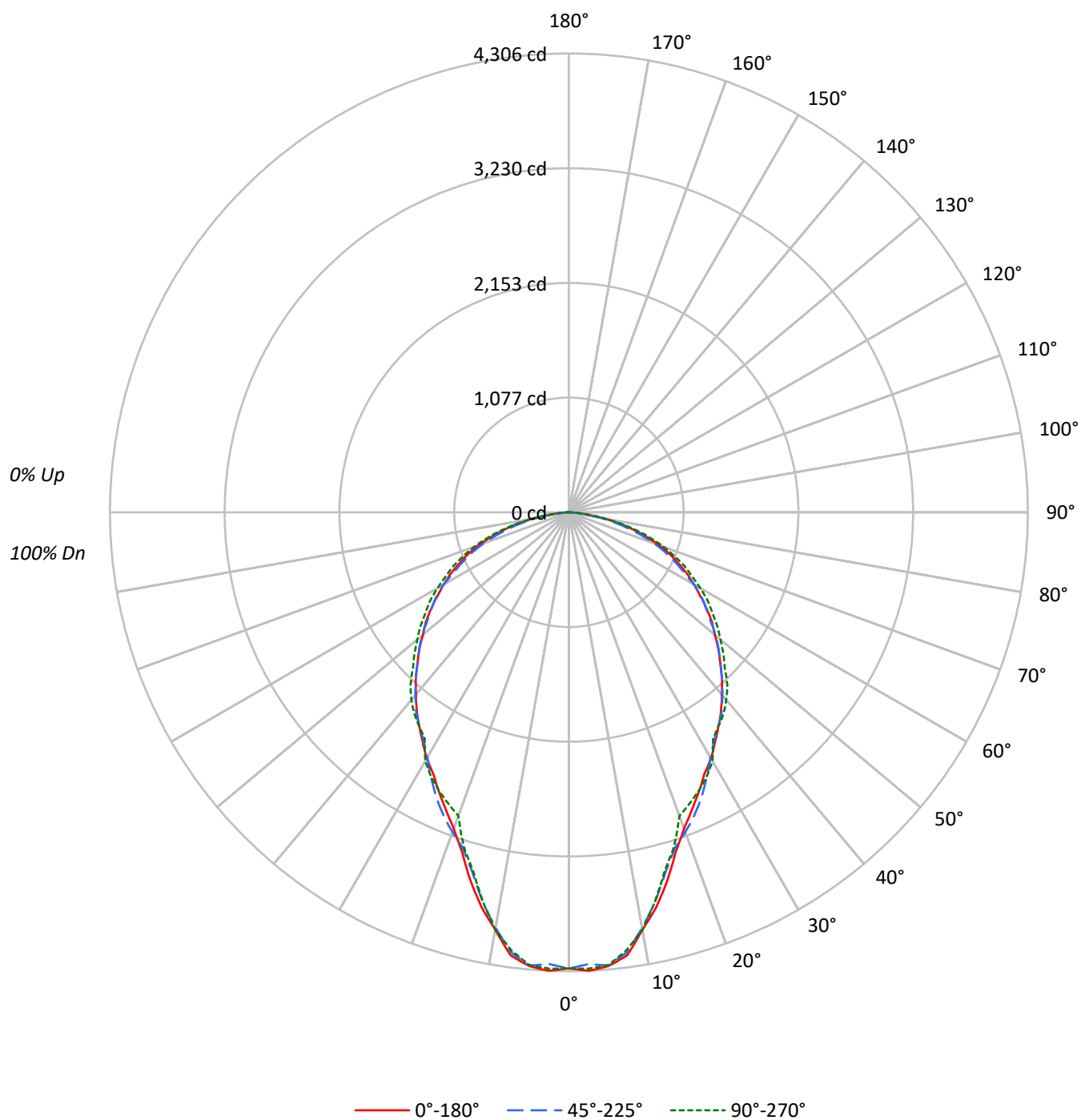
Lumens per Lamp: N/A
Luminaire Lumens: 9152.2 lumens
Efficiency: N/A
Efficacy: 97.8 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
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°	5758	5758	5758
5°	5774	5765	5759
10°	5433	5409	5430
15°	4978	4870	4842
20°	4522	4573	4340
25°	4288	4374	4282
30°	4142	4125	4187
35°	4021	4021	4021
40°	3920	3936	4034
45°	3824	3820	3938
50°	3741	3769	3885
55°	3701	3686	3853
60°	3653	3647	3833
65°	3606	3493	3812
70°	3537	3336	3712
75°	3274	2962	3436
80°	2655	2414	2724
85°	1683	1511	1477



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	397.5	4.3
10°-20°	993.7	10.9
20°-30°	1342.0	14.7
30°-40°	1536.8	16.8
40°-50°	1574.1	17.2
50°-60°	1428.3	15.6
60°-70°	1114.8	12.2
70°-80°	632.3	6.9
80°-90°	132.7	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°	2733.2	29.9
0°-40°	4270.0	46.7
0°-60°	7272.4	79.5
0°-90°	9152.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9152.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4280	4280	4280	4280	4280	
5°	4275	4226	4268	4277	4264	399
15°	3574	3585	3496	3514	3476	999
25°	2889	2926	2946	2875	2884	1333
35°	2448	2452	2448	2450	2448	1533
45°	2010	2025	2007	2090	2070	1554
55°	1578	1576	1571	1627	1642	1410
65°	1133	1108	1097	1148	1197	1123
75°	630	583	570	603	661	659
85°	109	98	98	91	96	144
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4279.5	4279.5	4279.5	4279.5	4279.5
2.5°	4306.2	4272.8	4243.9	4290.6	4286.2
5°	4275.0	4226.1	4268.4	4277.3	4263.9
7.5°	4192.7	4161.5	4163.8	4146.0	4143.7
10°	3976.8	3994.6	3959.0	3990.2	3974.6
12.5°	3792.1	3803.3	3740.9	3754.3	3736.5
15°	3574.0	3585.2	3496.1	3513.9	3476.1
17.5°	3335.9	3376.0	3302.5	3324.8	3284.7
20°	3157.9	3191.3	3193.5	3157.9	3031.0
22.5°	3017.7	3051.1	3077.8	2970.9	2957.6
25°	2888.6	2926.4	2946.5	2875.2	2884.2
27.5°	2759.5	2801.8	2801.8	2817.4	2797.4
30°	2666.1	2683.9	2654.9	2712.8	2695.0
32.5°	2554.8	2561.5	2537.0	2579.3	2517.0
35°	2448.0	2452.4	2448.0	2450.2	2448.0
37.5°	2345.6	2334.5	2354.5	2341.1	2383.4
40°	2232.1	2232.1	2241.0	2263.3	2296.6
42.5°	2127.5	2136.4	2125.3	2187.6	2200.9
45°	2009.6	2025.1	2007.3	2089.7	2069.6
47.5°	1902.7	1909.4	1905.0	1960.6	1965.1
50°	1787.0	1795.9	1800.4	1849.3	1856.0
52.5°	1691.3	1689.1	1673.5	1744.7	1755.9
55°	1577.8	1575.6	1571.2	1626.8	1642.4
57.5°	1462.1	1464.3	1475.5	1506.6	1544.4
60°	1357.5	1346.4	1355.3	1393.1	1424.3
62.5°	1250.7	1230.7	1210.6	1272.9	1301.9
65°	1132.7	1108.3	1097.1	1148.3	1197.3
67.5°	1023.7	983.6	977.0	1012.6	1070.4
70°	899.1	850.1	847.9	874.6	943.6
72.5°	761.1	718.8	707.7	743.3	805.6
75°	629.8	583.1	569.7	603.1	661.0
77.5°	487.4	449.5	440.6	458.4	505.2
80°	342.7	320.5	311.6	318.2	351.6
82.5°	215.9	200.3	195.8	193.6	211.4
85°	109.0	97.9	97.9	91.2	95.7
87.5°	33.4	31.2	28.9	22.3	24.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)