

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: P489742

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5STD-20-120-EDD-90**

Issue Date: 3/11/2021

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: P489742  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2101-115-8)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/11/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: CLM-24-4-INS-A19156-LD4-5STD-20-120-EDD-90  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

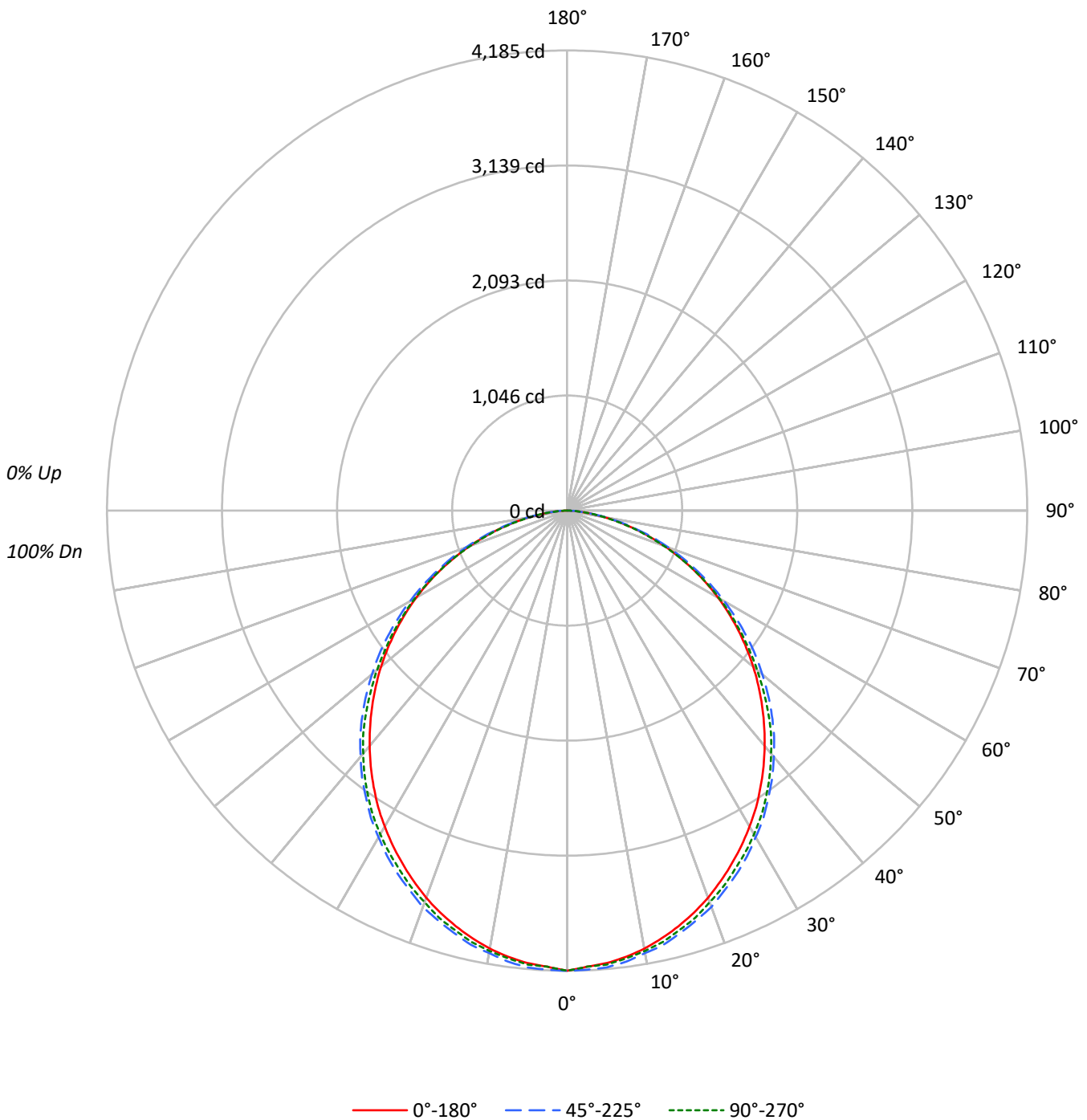
Lumens per Lamp: N/A  
Luminaire Lumens: 11002.9 lumens  
Efficiency: N/A  
Efficacy: 66.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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				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	105	100	97	106	102	98	95	98	95	92	94	92	89	91	88	87	85
2	99	91	85	79	97	90	83	78	86	81	76	83	78	75	80	76	73	71
3	91	80	72	66	88	79	71	65	76	70	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51
5	77	64	55	48	75	63	54	48	61	53	48	59	52	47	57	51	47	45
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39
7	66	52	44	38	64	51	43	37	50	43	37	49	42	37	47	41	37	35
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	5631	5631	5631
5°	5579	5631	5597
10°	5528	5584	5557
15°	5451	5539	5500
20°	5366	5493	5427
25°	5261	5414	5351
30°	5155	5329	5281
35°	5038	5238	5190
40°	4908	5134	5068
45°	4770	5010	4916
50°	4627	4850	4723
55°	4459	4667	4524
60°	4269	4446	4309
65°	4023	4177	4026
70°	3702	3851	3661
75°	3260	3407	3210
80°	2649	2764	2618
85°	1845	1965	1919



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	394.2	3.6
10°-20°	1117.0	10.2
20°-30°	1665.9	15.1
30°-40°	1974.1	17.9
40°-50°	1997.5	18.2
50°-60°	1744.5	15.9
60°-70°	1274.8	11.6
70°-80°	678.3	6.2
80°-90°	156.8	1.4
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°	3177.0	28.9
0°-40°	5151.1	46.8
0°-60°	8893.0	80.8
0°-90°	11002.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11002.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4185	4185	4185	4185	4185	
5°	4131	4138	4169	4179	4144	392
15°	3914	3940	3977	4001	3949	1103
25°	3544	3587	3647	3660	3605	1633
35°	3068	3116	3189	3211	3160	1918
45°	2507	2551	2633	2635	2584	1934
55°	1901	1939	1990	1961	1929	1699
65°	1264	1289	1312	1286	1264	1250
75°	627	641	655	631	617	667
85°	120	122	127	129	124	151
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4185.1	4185.1	4185.1	4185.1	4185.1
2.5°	4152.4	4165.9	4179.9	4186.0	4152.0
5°	4130.6	4138.5	4169.4	4179.0	4143.7
7.5°	4094.9	4106.6	4136.7	4141.1	4107.1
10°	4046.0	4066.9	4087.0	4108.8	4067.4
12.5°	3983.7	4012.0	4046.0	4049.9	4018.5
15°	3913.5	3939.6	3976.7	4000.7	3948.8
17.5°	3835.0	3860.3	3908.2	3912.6	3881.2
20°	3747.3	3778.7	3836.3	3846.3	3790.1
22.5°	3647.9	3690.2	3738.2	3747.8	3706.3
25°	3543.7	3587.3	3646.6	3660.1	3604.7
27.5°	3434.7	3476.5	3543.3	3552.9	3506.2
30°	3317.8	3357.1	3430.3	3446.5	3398.9
32.5°	3199.2	3238.5	3319.6	3333.1	3286.9
35°	3067.5	3115.5	3189.2	3211.4	3159.5
37.5°	2933.2	2979.9	3063.6	3083.7	3027.9
40°	2794.1	2840.4	2922.8	2939.3	2885.7
42.5°	2652.0	2698.2	2786.3	2788.9	2744.4
45°	2506.8	2551.3	2633.2	2635.4	2583.5
47.5°	2359.4	2404.3	2477.6	2469.3	2420.5
50°	2210.3	2253.0	2317.1	2300.5	2256.5
52.5°	2055.9	2097.4	2158.0	2130.9	2089.5
55°	1900.7	1939.1	1989.7	1960.9	1928.6
57.5°	1744.2	1783.0	1821.8	1792.6	1764.7
60°	1586.3	1620.3	1652.2	1622.5	1601.1
62.5°	1425.9	1455.1	1482.5	1454.2	1434.1
65°	1263.6	1289.4	1312.0	1285.9	1264.5
67.5°	1102.3	1124.1	1145.0	1118.0	1095.8
70°	941.0	959.7	978.9	951.0	930.5
72.5°	781.8	798.4	815.4	788.4	770.5
75°	627.0	641.4	655.4	631.4	617.4
77.5°	479.2	491.4	501.0	485.7	472.2
80°	341.9	351.0	356.7	350.6	337.9
82.5°	219.8	226.3	229.4	228.9	220.6
85°	119.5	121.7	127.3	128.6	124.3
87.5°	46.2	49.3	50.6	54.5	50.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)