

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: P489616

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-2HI-35-120-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: P489616  
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-LD4-2HI-35-120-EDD-90  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

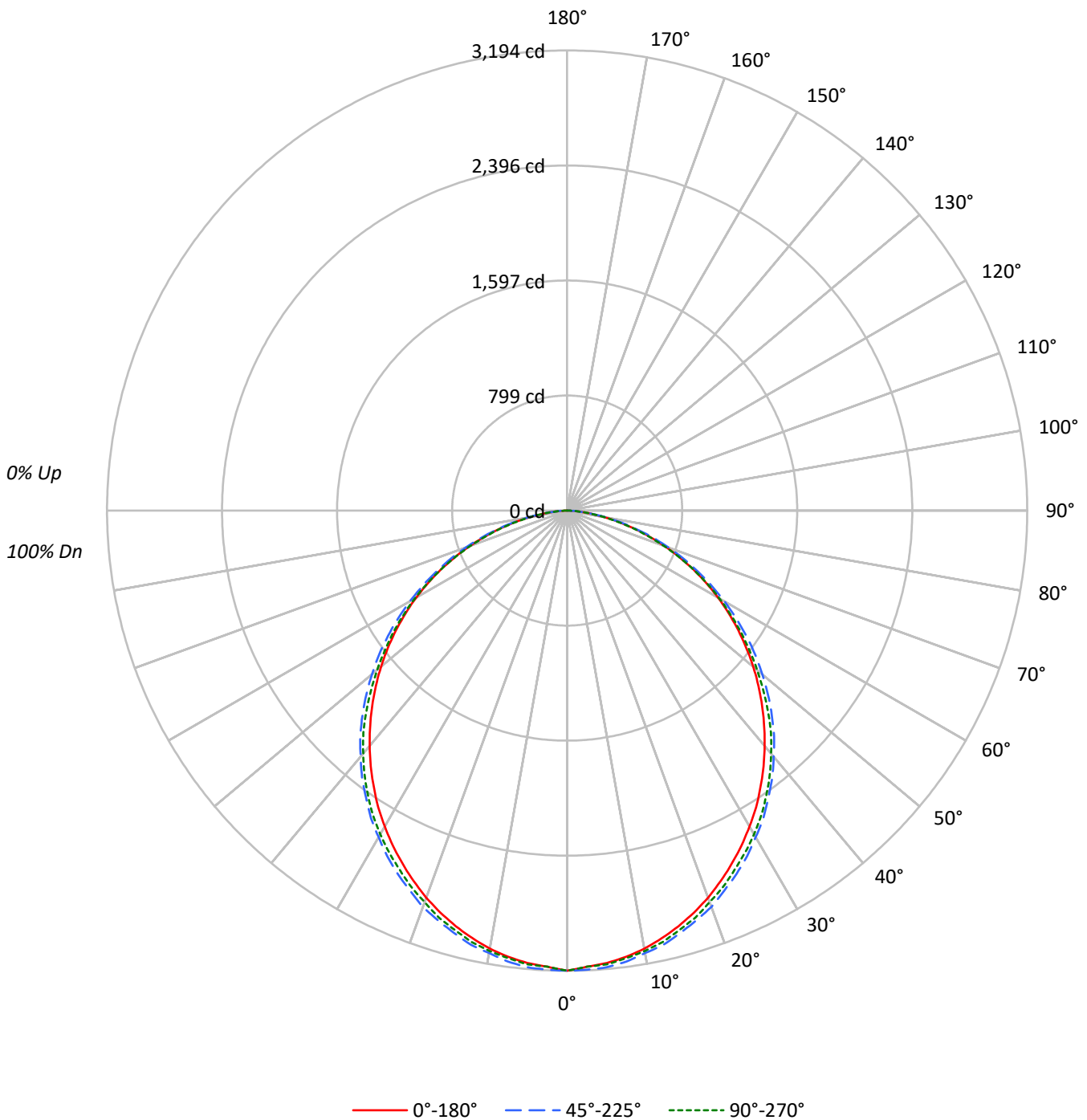
Lumens per Lamp: N/A  
Luminaire Lumens: 8396.5 lumens  
Efficiency: N/A  
Efficacy: 97.2 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 86.4  
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°	4297	4297	4297
5°	4257	4297	4271
10°	4218	4261	4241
15°	4160	4227	4198
20°	4094	4192	4141
25°	4015	4131	4084
30°	3934	4067	4030
35°	3845	3997	3960
40°	3745	3918	3868
45°	3640	3824	3751
50°	3531	3701	3605
55°	3403	3562	3453
60°	3257	3393	3288
65°	3070	3188	3072
70°	2825	2939	2793
75°	2488	2600	2450
80°	2022	2109	1998
85°	1408	1501	1463



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	300.8	3.6
10°-20°	852.4	10.2
20°-30°	1271.3	15.1
30°-40°	1506.5	17.9
40°-50°	1524.3	18.2
50°-60°	1331.2	15.9
60°-70°	972.8	11.6
70°-80°	517.6	6.2
80°-90°	119.6	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°	2424.4	28.9
0°-40°	3930.9	46.8
0°-60°	6786.4	80.8
0°-90°	8396.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8396.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3194	3194	3194	3194	3194	
5°	3152	3158	3182	3189	3162	299
15°	2986	3006	3035	3053	3013	842
25°	2704	2738	2783	2793	2751	1246
35°	2341	2378	2434	2451	2411	1464
45°	1913	1947	2010	2011	1972	1476
55°	1450	1480	1518	1496	1472	1297
65°	964	984	1001	981	965	954
75°	478	490	500	482	471	509
85°	91	93	97	98	95	115
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3193.7	3193.7	3193.7	3193.7	3193.7
2.5°	3168.8	3179.1	3189.7	3194.4	3168.4
5°	3152.1	3158.1	3181.8	3189.1	3162.1
7.5°	3124.9	3133.8	3156.8	3160.1	3134.2
10°	3087.6	3103.6	3118.9	3135.5	3103.9
12.5°	3040.0	3061.6	3087.6	3090.6	3066.6
15°	2986.4	3006.4	3034.7	3053.0	3013.4
17.5°	2926.5	2945.8	2982.4	2985.8	2961.8
20°	2859.6	2883.6	2927.5	2935.2	2892.3
22.5°	2783.8	2816.1	2852.7	2860.0	2828.4
25°	2704.3	2737.5	2782.8	2793.1	2750.8
27.5°	2621.1	2653.0	2703.9	2711.2	2675.6
30°	2531.9	2561.8	2617.7	2630.1	2593.8
32.5°	2441.4	2471.3	2533.2	2543.5	2508.3
35°	2340.9	2377.5	2433.7	2450.7	2411.1
37.5°	2238.4	2274.0	2337.9	2353.2	2310.6
40°	2132.3	2167.5	2230.4	2243.1	2202.1
42.5°	2023.8	2059.1	2126.3	2128.3	2094.3
45°	1913.0	1946.9	2009.5	2011.1	1971.5
47.5°	1800.5	1834.8	1890.7	1884.4	1847.1
50°	1686.7	1719.3	1768.2	1755.6	1722.0
52.5°	1568.9	1600.5	1646.8	1626.1	1594.5
55°	1450.5	1479.7	1518.3	1496.4	1471.8
57.5°	1331.0	1360.6	1390.2	1367.9	1346.6
60°	1210.5	1236.5	1260.8	1238.2	1221.9
62.5°	1088.1	1110.4	1131.3	1109.7	1094.4
65°	964.3	983.9	1001.2	981.3	965.0
67.5°	841.2	857.8	873.8	853.2	836.2
70°	718.1	732.4	747.0	725.7	710.1
72.5°	596.6	609.3	622.2	601.6	588.0
75°	478.5	489.5	500.1	481.8	471.2
77.5°	365.7	375.0	382.3	370.7	360.4
80°	260.9	267.9	272.2	267.5	257.9
82.5°	167.7	172.7	175.0	174.7	168.4
85°	91.2	92.8	97.2	98.2	94.8
87.5°	35.3	37.6	38.6	41.6	38.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)