

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: P489148

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-4HI-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: P489148  
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-24-2-INS-A19156-LD4-4HI-35-120-EDD-90  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

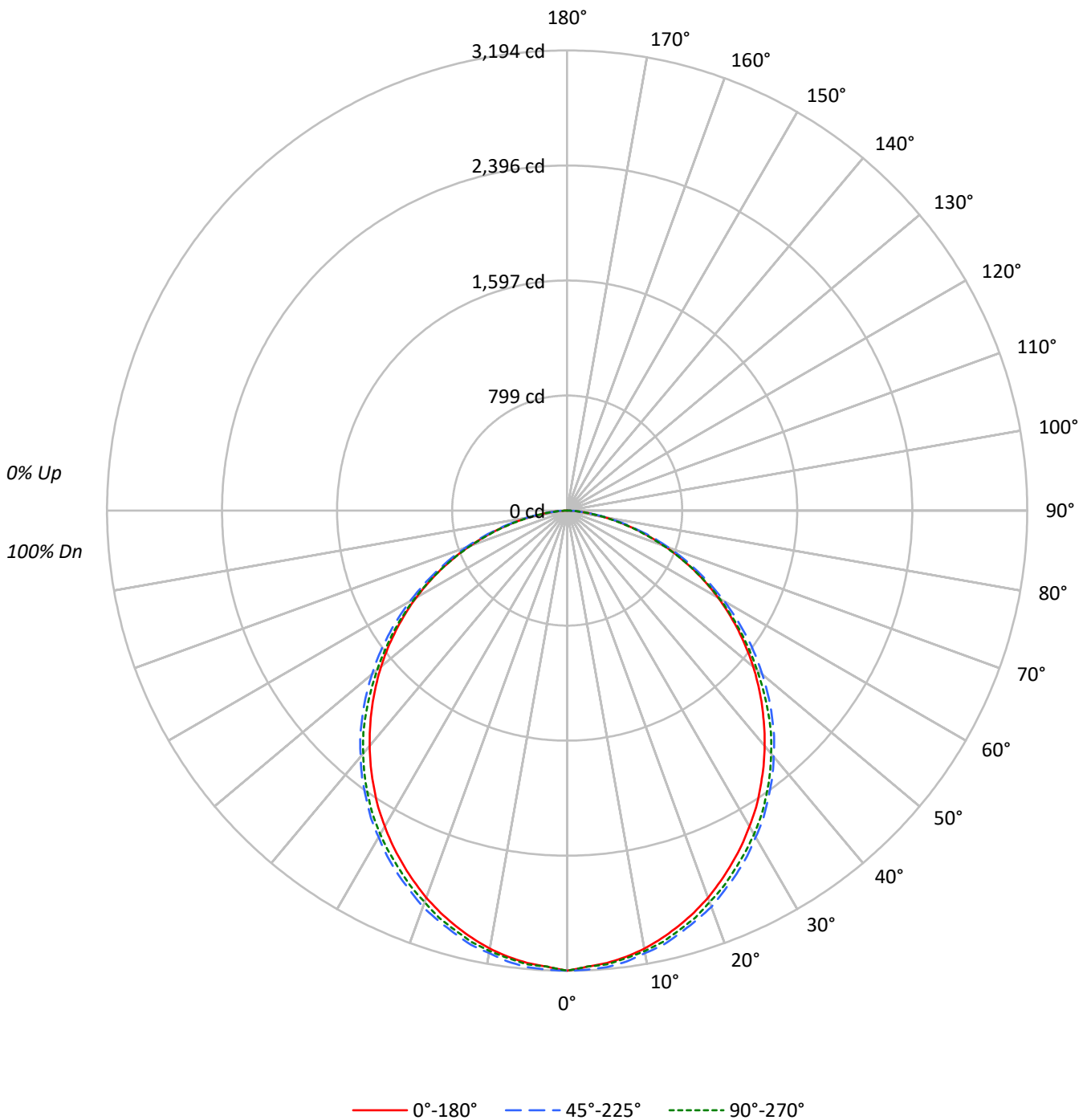
Lumens per Lamp: N/A  
Luminaire Lumens: 8396.2 lumens  
Efficiency: N/A  
Efficacy: 97.2 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

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°	8594	8594	8594
5°	8514	8594	8541
10°	8437	8522	8481
15°	8320	8454	8395
20°	8189	8383	8282
25°	8029	8262	8167
30°	7867	8134	8059
35°	7690	7995	7920
40°	7490	7835	7736
45°	7280	7647	7503
50°	7061	7402	7209
55°	6805	7123	6905
60°	6515	6785	6576
65°	6140	6375	6144
70°	5649	5877	5587
75°	4975	5200	4899
80°	4043	4218	3997
85°	2816	3001	2927



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	300.8	3.6
10°-20°	852.3	10.2
20°-30°	1271.2	15.1
30°-40°	1506.4	17.9
40°-50°	1524.2	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°	2424.3	28.9
0°-40°	3930.7	46.8
0°-60°	6786.2	80.8
0°-90°	8396.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8396.2	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	2737	2783	2793	2751	1246
35°	2341	2377	2434	2451	2411	1464
45°	1913	1947	2009	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°	3193.6	3193.6	3193.6	3193.6	3193.6
2.5°	3168.7	3179.0	3189.6	3194.3	3168.3
5°	3152.0	3158.0	3181.6	3189.0	3162.0
7.5°	3124.7	3133.7	3156.7	3160.0	3134.1
10°	3087.5	3103.4	3118.7	3135.4	3103.8
12.5°	3039.9	3061.5	3087.5	3090.5	3066.5
15°	2986.3	3006.3	3034.6	3052.9	3013.3
17.5°	2926.4	2945.7	2982.3	2985.7	2961.7
20°	2859.5	2883.5	2927.4	2935.1	2892.2
22.5°	2783.7	2816.0	2852.6	2859.9	2828.3
25°	2704.2	2737.4	2782.7	2793.0	2750.7
27.5°	2621.0	2652.9	2703.8	2711.1	2675.5
30°	2531.8	2561.7	2617.6	2630.0	2593.7
32.5°	2441.3	2471.2	2533.1	2543.4	2508.2
35°	2340.8	2377.4	2433.6	2450.6	2411.0
37.5°	2238.3	2273.9	2337.8	2353.1	2310.5
40°	2132.2	2167.5	2230.3	2243.0	2202.1
42.5°	2023.7	2059.0	2126.2	2128.2	2094.3
45°	1912.9	1946.8	2009.4	2011.1	1971.5
47.5°	1800.4	1834.7	1890.6	1884.3	1847.0
50°	1686.6	1719.3	1768.2	1755.5	1721.9
52.5°	1568.9	1600.5	1646.7	1626.1	1594.5
55°	1450.4	1479.7	1518.3	1496.3	1471.7
57.5°	1331.0	1360.6	1390.2	1367.9	1346.6
60°	1210.5	1236.5	1260.7	1238.1	1221.8
62.5°	1088.1	1110.3	1131.3	1109.7	1094.4
65°	964.3	983.9	1001.2	981.2	964.9
67.5°	841.2	857.8	873.8	853.1	836.2
70°	718.0	732.4	747.0	725.7	710.1
72.5°	596.6	609.2	622.2	601.6	587.9
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)