

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: P489208

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-5STD-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: P489208  
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-LD4-5STD-35-120-EDD-90  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

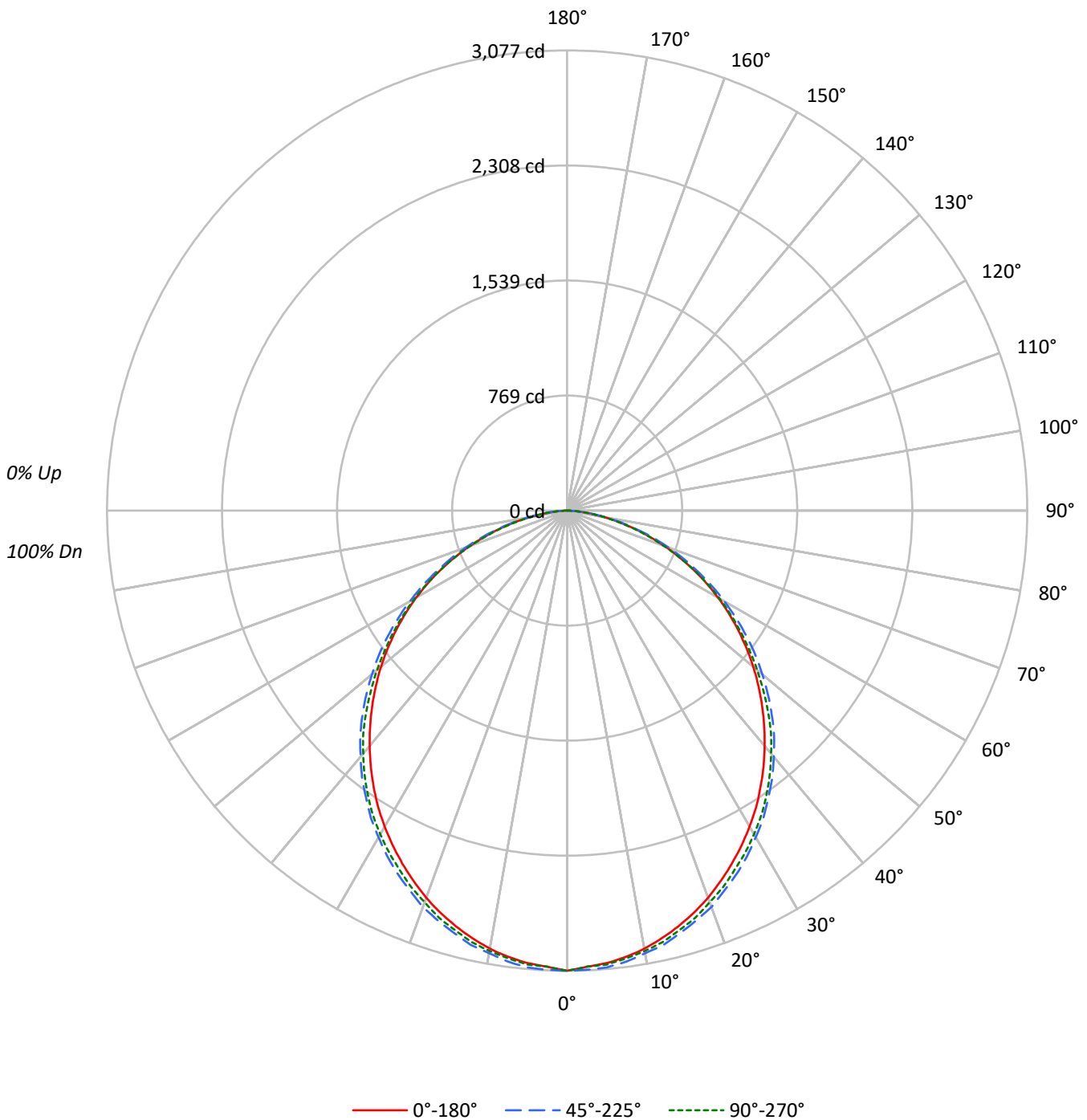
Lumens per Lamp: N/A  
Luminaire Lumens: 8090.1 lumens  
Efficiency: N/A  
Efficacy: 97.2 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 83.2  
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°	8281	8281	8281
5°	8204	8281	8230
10°	8129	8211	8172
15°	8016	8146	8089
20°	7890	8078	7980
25°	7736	7961	7870
30°	7580	7837	7765
35°	7409	7703	7632
40°	7217	7549	7454
45°	7015	7368	7229
50°	6804	7132	6946
55°	6556	6863	6653
60°	6278	6538	6336
65°	5916	6143	5920
70°	5444	5663	5383
75°	4793	5010	4720
80°	3896	4065	3851
85°	2711	2890	2822



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	289.8	3.6
10°-20°	821.3	10.2
20°-30°	1224.9	15.1
30°-40°	1451.5	17.9
40°-50°	1468.7	18.2
50°-60°	1282.7	15.9
60°-70°	937.3	11.6
70°-80°	498.7	6.2
80°-90°	115.3	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°	2335.9	28.9
0°-40°	3787.4	46.8
0°-60°	6538.8	80.8
0°-90°	8090.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8090.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3077	3077	3077	3077	3077	
5°	3037	3043	3066	3073	3047	288
15°	2877	2897	2924	2942	2903	811
25°	2606	2638	2681	2691	2650	1200
35°	2256	2291	2345	2361	2323	1411
45°	1843	1876	1936	1938	1900	1422
55°	1398	1426	1463	1442	1418	1249
65°	929	948	965	946	930	919
75°	461	472	482	464	454	490
85°	88	89	94	95	91	111
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3077.2	3077.2	3077.2	3077.2	3077.2
2.5°	3053.1	3063.1	3073.3	3077.8	3052.8
5°	3037.1	3042.9	3065.6	3072.7	3046.7
7.5°	3010.8	3019.5	3041.6	3044.8	3019.8
10°	2974.9	2990.3	3005.0	3021.1	2990.6
12.5°	2929.1	2949.9	2974.9	2977.8	2954.7
15°	2877.4	2896.7	2923.9	2941.6	2903.4
17.5°	2819.7	2838.3	2873.6	2876.8	2853.7
20°	2755.3	2778.4	2820.7	2828.1	2786.7
22.5°	2682.2	2713.3	2748.6	2755.6	2725.2
25°	2605.6	2637.6	2681.2	2691.2	2650.5
27.5°	2525.4	2556.2	2605.3	2612.3	2578.0
30°	2439.5	2468.4	2522.2	2534.1	2499.1
32.5°	2352.3	2381.1	2440.8	2450.7	2416.7
35°	2255.5	2290.7	2344.9	2361.3	2323.1
37.5°	2156.7	2191.0	2252.6	2267.3	2226.3
40°	2054.4	2088.4	2149.0	2161.2	2121.8
42.5°	1949.9	1983.9	2048.7	2050.6	2017.9
45°	1843.2	1875.9	1936.1	1937.7	1899.6
47.5°	1734.8	1767.8	1821.7	1815.6	1779.7
50°	1625.2	1656.6	1703.7	1691.5	1659.1
52.5°	1511.7	1542.1	1586.7	1566.8	1536.3
55°	1397.5	1425.7	1462.9	1441.8	1418.0
57.5°	1282.4	1311.0	1339.5	1318.0	1297.5
60°	1166.4	1191.4	1214.8	1193.0	1177.3
62.5°	1048.4	1069.9	1090.1	1069.2	1054.5
65°	929.1	948.0	964.7	945.5	929.8
67.5°	810.5	826.5	841.9	822.0	805.7
70°	691.9	705.7	719.8	699.2	684.2
72.5°	574.8	587.0	599.5	579.7	566.5
75°	461.0	471.6	481.9	464.2	454.0
77.5°	352.3	361.3	368.4	357.2	347.2
80°	251.4	258.1	262.3	257.8	248.5
82.5°	161.6	166.4	168.6	168.3	162.2
85°	87.8	89.4	93.6	94.6	91.4
87.5°	34.0	36.2	37.2	40.1	36.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)