

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: P489189

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-5HI-50-120-EDD**

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: P489189  
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-LD4-5HI-50-120-EDD  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

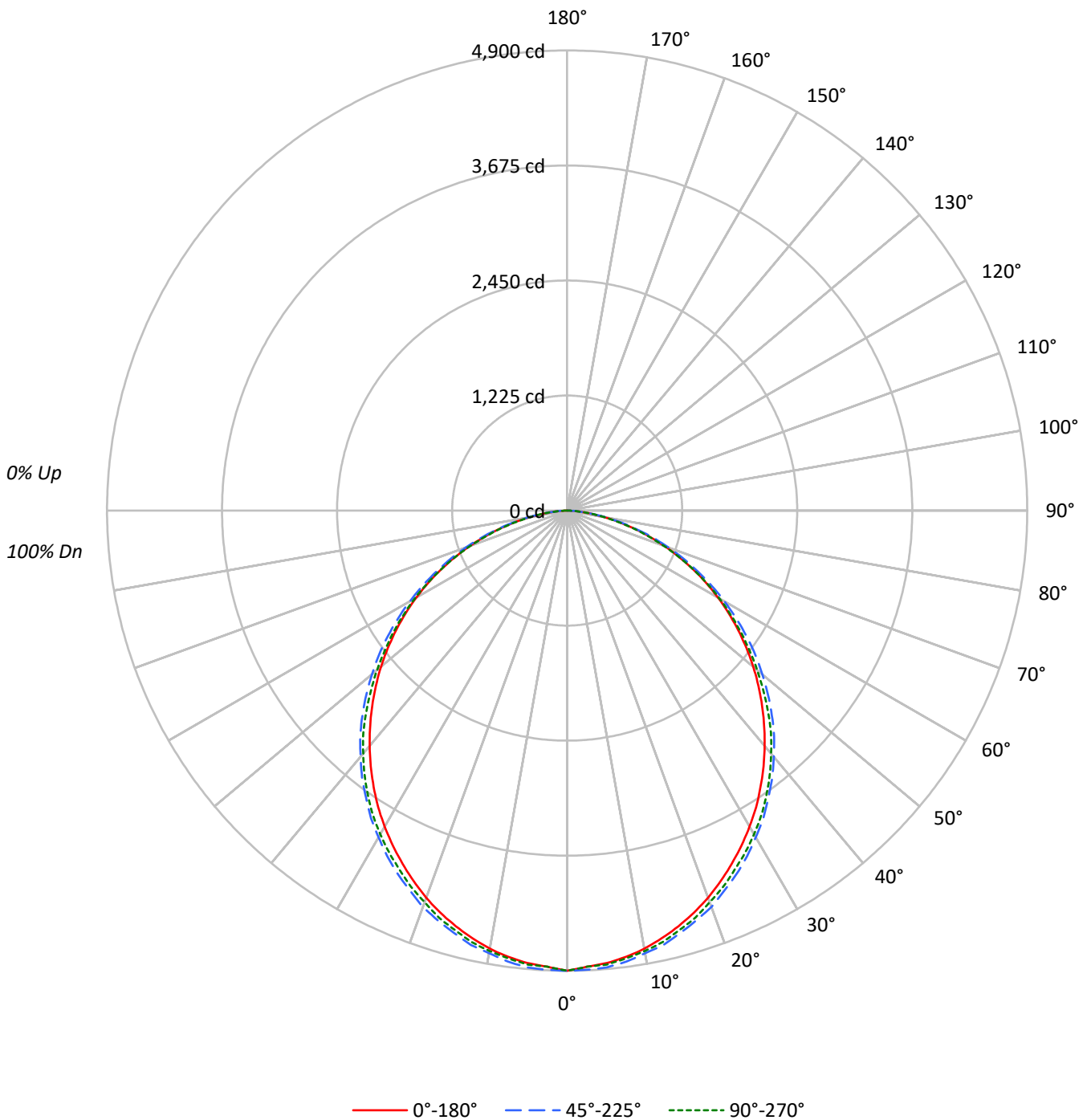
Lumens per Lamp: N/A  
Luminaire Lumens: 12883.2 lumens  
Efficiency: N/A  
Efficacy: 119.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 108  
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°	13187	13187	13187
5°	13065	13187	13106
10°	12945	13076	13013
15°	12766	12972	12881
20°	12565	12863	12708
25°	12320	12678	12532
30°	12071	12480	12366
35°	11799	12267	12153
40°	11493	12022	11869
45°	11170	11733	11512
50°	10834	11358	11061
55°	10441	10930	10595
60°	9996	10411	10090
65°	9421	9782	9428
70°	8669	9018	8572
75°	7634	7979	7516
80°	6203	6471	6132
85°	4319	4604	4492



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	461.5	3.6
10°-20°	1307.8	10.2
20°-30°	1950.6	15.1
30°-40°	2311.4	17.9
40°-50°	2338.8	18.2
50°-60°	2042.6	15.9
60°-70°	1492.7	11.6
70°-80°	794.2	6.2
80°-90°	183.6	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°	3719.9	28.9
0°-40°	6031.3	46.8
0°-60°	10412.8	80.8
0°-90°	12883.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12883.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4900	4900	4900	4900	4900	
5°	4836	4846	4882	4893	4852	459
15°	4582	4613	4656	4684	4624	1292
25°	4149	4200	4270	4286	4221	1912
35°	3592	3648	3734	3760	3700	2246
45°	2935	2987	3083	3086	3025	2264
55°	2226	2270	2330	2296	2258	1989
65°	1480	1510	1536	1506	1481	1464
75°	734	751	767	739	723	781
85°	140	142	149	151	146	177
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4900.3	4900.3	4900.3	4900.3	4900.3
2.5°	4862.0	4877.8	4894.2	4901.3	4861.5
5°	4836.5	4845.7	4881.9	4893.2	4851.8
7.5°	4794.6	4808.4	4843.6	4848.7	4808.9
10°	4737.4	4762.0	4785.4	4811.0	4762.5
12.5°	4664.4	4697.6	4737.4	4742.0	4705.3
15°	4582.2	4612.9	4656.3	4684.3	4623.6
17.5°	4490.3	4519.9	4576.1	4581.2	4544.5
20°	4387.7	4424.5	4491.9	4503.6	4437.7
22.5°	4271.3	4320.8	4377.0	4388.2	4339.7
25°	4149.3	4200.3	4269.8	4285.6	4220.8
27.5°	4021.6	4070.7	4148.8	4160.0	4105.4
30°	3884.8	3930.8	4016.5	4035.4	3979.8
32.5°	3745.9	3791.9	3886.9	3902.7	3848.6
35°	3591.8	3647.9	3734.2	3760.2	3699.5
37.5°	3434.5	3489.1	3587.2	3610.6	3545.3
40°	3271.6	3325.8	3422.3	3441.7	3378.9
42.5°	3105.2	3159.3	3262.4	3265.5	3213.4
45°	2935.2	2987.3	3083.2	3085.8	3025.0
47.5°	2762.6	2815.2	2901.0	2891.3	2834.1
50°	2588.0	2638.0	2713.1	2693.7	2642.1
52.5°	2407.3	2455.8	2526.7	2495.1	2446.6
55°	2225.5	2270.4	2329.7	2296.0	2258.2
57.5°	2042.2	2087.7	2133.1	2098.9	2066.2
60°	1857.4	1897.2	1934.5	1899.8	1874.8
62.5°	1669.5	1703.7	1735.9	1702.7	1679.2
65°	1479.6	1509.7	1536.3	1505.6	1480.6
67.5°	1290.7	1316.2	1340.7	1309.1	1283.0
70°	1101.8	1123.7	1146.2	1113.5	1089.5
72.5°	915.4	934.8	954.7	923.1	902.2
75°	734.2	751.0	767.4	739.3	722.9
77.5°	561.1	575.4	586.6	568.8	552.9
80°	400.3	411.0	417.6	410.5	395.7
82.5°	257.3	265.0	268.6	268.0	258.3
85°	139.9	142.4	149.1	150.6	145.5
87.5°	54.1	57.7	59.2	63.8	58.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)