

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: P489709

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-4STD-27-120-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: P489709  
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-LD4-4STD-27-120-EDD  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

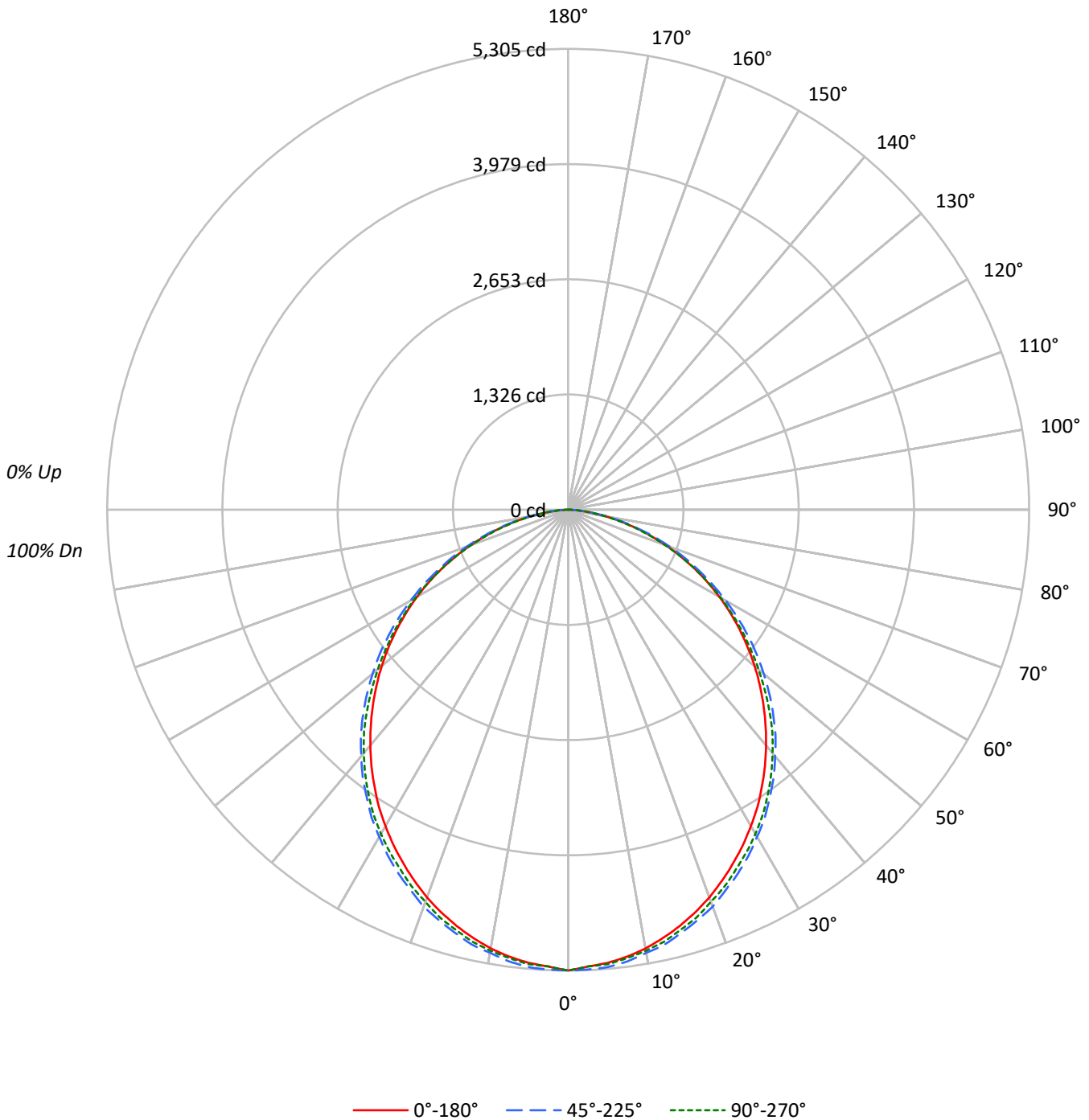
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13946.4 lumens  
Efficiency: N/A  
Efficacy: 104.7 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): 133.2  
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	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°	7137	7137	7137
5°	7071	7138	7094
10°	7007	7078	7044
15°	6910	7021	6972
20°	6801	6962	6879
25°	6668	6862	6783
30°	6534	6755	6693
35°	6387	6640	6578
40°	6221	6507	6424
45°	6046	6351	6231
50°	5864	6148	5987
55°	5651	5916	5734
60°	5411	5635	5461
65°	5099	5294	5103
70°	4692	4881	4640
75°	4132	4318	4068
80°	3357	3503	3319
85°	2337	2492	2431



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	499.6	3.6
10°-20°	1415.8	10.2
20°-30°	2111.5	15.1
30°-40°	2502.2	17.9
40°-50°	2531.8	18.2
50°-60°	2211.2	15.9
60°-70°	1615.8	11.6
70°-80°	859.8	6.2
80°-90°	198.7	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°	4026.9	28.9
0°-40°	6529.1	46.8
0°-60°	11272.1	80.8
0°-90°	13946.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13946.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5305	5305	5305	5305	5305	
5°	5236	5246	5285	5297	5252	496
15°	4960	4994	5040	5071	5005	1398
25°	4492	4547	4622	4639	4569	2069
35°	3888	3949	4042	4071	4005	2432
45°	3177	3234	3338	3340	3275	2451
55°	2409	2458	2522	2485	2444	2154
65°	1602	1634	1663	1630	1603	1585
75°	795	813	831	800	783	845
85°	151	154	161	163	158	192
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5304.7	5304.7	5304.7	5304.7	5304.7
2.5°	5263.3	5280.4	5298.1	5305.8	5262.7
5°	5235.6	5245.6	5284.8	5297.0	5252.2
7.5°	5190.3	5205.2	5243.4	5248.9	5205.8
10°	5128.4	5154.9	5180.4	5208.0	5155.5
12.5°	5049.4	5085.3	5128.4	5133.4	5093.6
15°	4960.4	4993.6	5040.5	5070.9	5005.2
17.5°	4860.9	4893.0	4953.8	4959.3	4919.5
20°	4749.8	4789.6	4862.6	4875.3	4804.0
22.5°	4623.8	4677.4	4738.2	4750.4	4697.9
25°	4491.7	4547.0	4622.1	4639.3	4569.1
27.5°	4353.5	4406.6	4491.2	4503.3	4444.2
30°	4205.4	4255.2	4348.0	4368.5	4308.2
32.5°	4055.1	4104.8	4207.6	4224.8	4166.2
35°	3888.2	3949.0	4042.4	4070.6	4004.8
37.5°	3717.9	3777.1	3883.2	3908.6	3837.9
40°	3541.6	3600.2	3704.7	3725.7	3657.7
42.5°	3361.5	3420.0	3531.7	3535.0	3478.6
45°	3177.4	3233.8	3337.7	3340.5	3274.7
47.5°	2990.6	3047.5	3140.4	3129.9	3068.0
50°	2801.6	2855.7	2937.0	2916.0	2860.2
52.5°	2605.9	2658.4	2735.3	2701.0	2648.5
55°	2409.2	2457.8	2521.9	2485.4	2444.5
57.5°	2210.8	2259.9	2309.1	2272.1	2236.7
60°	2010.7	2053.8	2094.1	2056.6	2029.5
62.5°	1807.3	1844.3	1879.1	1843.2	1817.8
65°	1601.7	1634.3	1663.0	1629.9	1602.8
67.5°	1397.2	1424.8	1451.4	1417.1	1388.9
70°	1192.7	1216.5	1240.8	1205.4	1179.4
72.5°	991.0	1012.0	1033.5	999.3	976.6
75°	794.8	813.0	830.7	800.3	782.6
77.5°	607.4	622.9	635.0	615.7	598.6
80°	433.3	444.9	452.1	444.4	428.3
82.5°	278.6	286.8	290.7	290.2	279.7
85°	151.4	154.2	161.4	163.0	157.5
87.5°	58.6	62.5	64.1	69.1	63.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)