

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: P489737

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5LO-35-120-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: P489737  
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-LD4-5LO-35-120-EDD  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

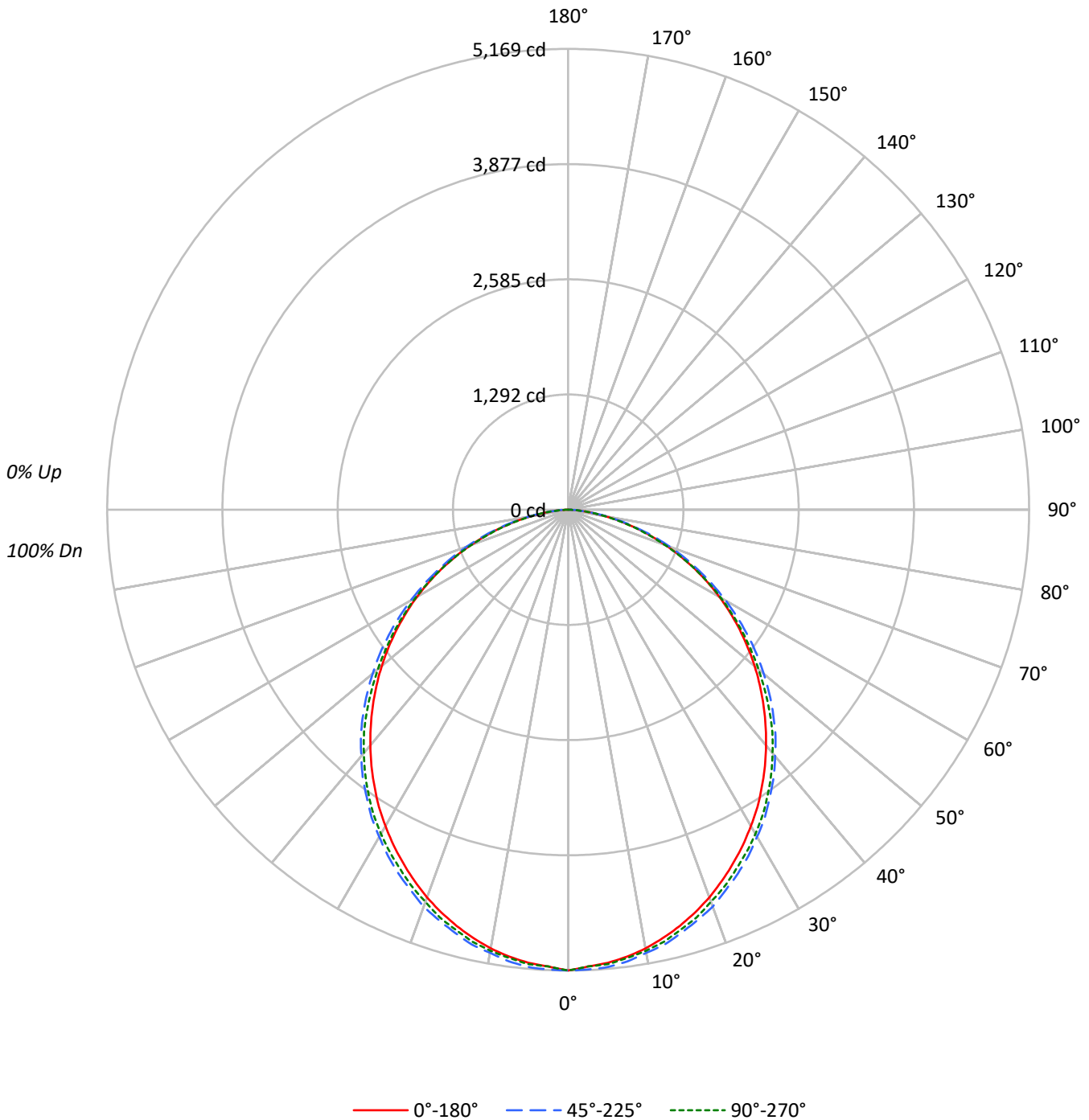
Lumens per Lamp: N/A  
Luminaire Lumens: 13588.6 lumens  
Efficiency: N/A  
Efficacy: 116.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 117  
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°	6954	6954	6954
5°	6890	6955	6912
10°	6827	6896	6863
15°	6732	6841	6793
20°	6627	6784	6702
25°	6497	6686	6609
30°	6366	6582	6522
35°	6223	6469	6409
40°	6061	6340	6260
45°	5891	6188	6071
50°	5714	5990	5833
55°	5507	5764	5587
60°	5272	5491	5321
65°	4968	5159	4972
70°	4572	4756	4521
75°	4026	4208	3964
80°	3271	3413	3233
85°	2279	2427	2370



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	486.8	3.6
10°-20°	1379.4	10.2
20°-30°	2057.4	15.1
30°-40°	2438.0	17.9
40°-50°	2466.9	18.2
50°-60°	2154.5	15.9
60°-70°	1574.4	11.6
70°-80°	837.7	6.2
80°-90°	193.6	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°	3923.6	28.9
0°-40°	6361.6	46.8
0°-60°	10982.9	80.8
0°-90°	13588.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13588.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5169	5169	5169	5169	5169	
5°	5101	5111	5149	5161	5118	484
15°	4833	4865	4911	4941	4877	1363
25°	4376	4430	4504	4520	4452	2016
35°	3788	3848	3939	3966	3902	2369
45°	3096	3151	3252	3255	3191	2388
55°	2347	2395	2457	2422	2382	2098
65°	1561	1592	1620	1588	1562	1544
75°	774	792	809	780	762	823
85°	148	150	157	159	154	187
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5168.6	5168.6	5168.6	5168.6	5168.6
2.5°	5128.2	5144.9	5162.2	5169.7	5127.7
5°	5101.3	5111.0	5149.2	5161.1	5117.5
7.5°	5057.1	5071.7	5108.8	5114.2	5072.2
10°	4996.8	5022.7	5047.5	5074.4	5023.2
12.5°	4919.8	4954.8	4996.8	5001.7	4962.9
15°	4833.1	4865.4	4911.2	4940.8	4876.7
17.5°	4736.2	4767.4	4826.7	4832.1	4793.3
20°	4628.0	4666.7	4737.8	4750.2	4680.7
22.5°	4505.2	4557.4	4616.6	4628.5	4577.3
25°	4376.5	4430.3	4503.6	4520.3	4451.9
27.5°	4241.8	4293.5	4375.9	4387.8	4330.2
30°	4097.5	4146.0	4236.5	4256.4	4197.7
32.5°	3951.0	3999.5	4099.7	4116.4	4059.3
35°	3788.4	3847.7	3938.7	3966.1	3902.0
37.5°	3622.6	3680.2	3783.6	3808.3	3739.4
40°	3450.8	3507.9	3609.6	3630.1	3563.9
42.5°	3275.2	3332.3	3441.1	3444.3	3389.4
45°	3095.9	3150.8	3252.1	3254.8	3190.7
47.5°	2913.9	2969.3	3059.8	3049.6	2989.3
50°	2729.7	2782.5	2861.6	2841.2	2786.8
52.5°	2539.1	2590.2	2665.1	2631.7	2580.5
55°	2347.4	2394.8	2457.2	2421.7	2381.8
57.5°	2154.0	2202.0	2249.9	2213.8	2179.4
60°	1959.1	2001.1	2040.4	2003.8	1977.4
62.5°	1760.9	1797.0	1830.9	1795.9	1771.2
65°	1560.6	1592.4	1620.4	1588.1	1561.7
67.5°	1361.4	1388.3	1414.1	1380.7	1353.3
70°	1162.1	1185.3	1209.0	1174.5	1149.2
72.5°	965.5	986.0	1007.0	973.6	951.5
75°	774.4	792.1	809.4	779.8	762.5
77.5°	591.8	606.9	618.7	599.9	583.2
80°	422.2	433.5	440.5	433.0	417.3
82.5°	271.4	279.5	283.3	282.7	272.5
85°	147.6	150.2	157.2	158.9	153.5
87.5°	57.1	60.9	62.5	67.3	61.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)