

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: P489598

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-1STD-20-120-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: P489598  
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-LD4-1STD-20-120-EDD-90  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

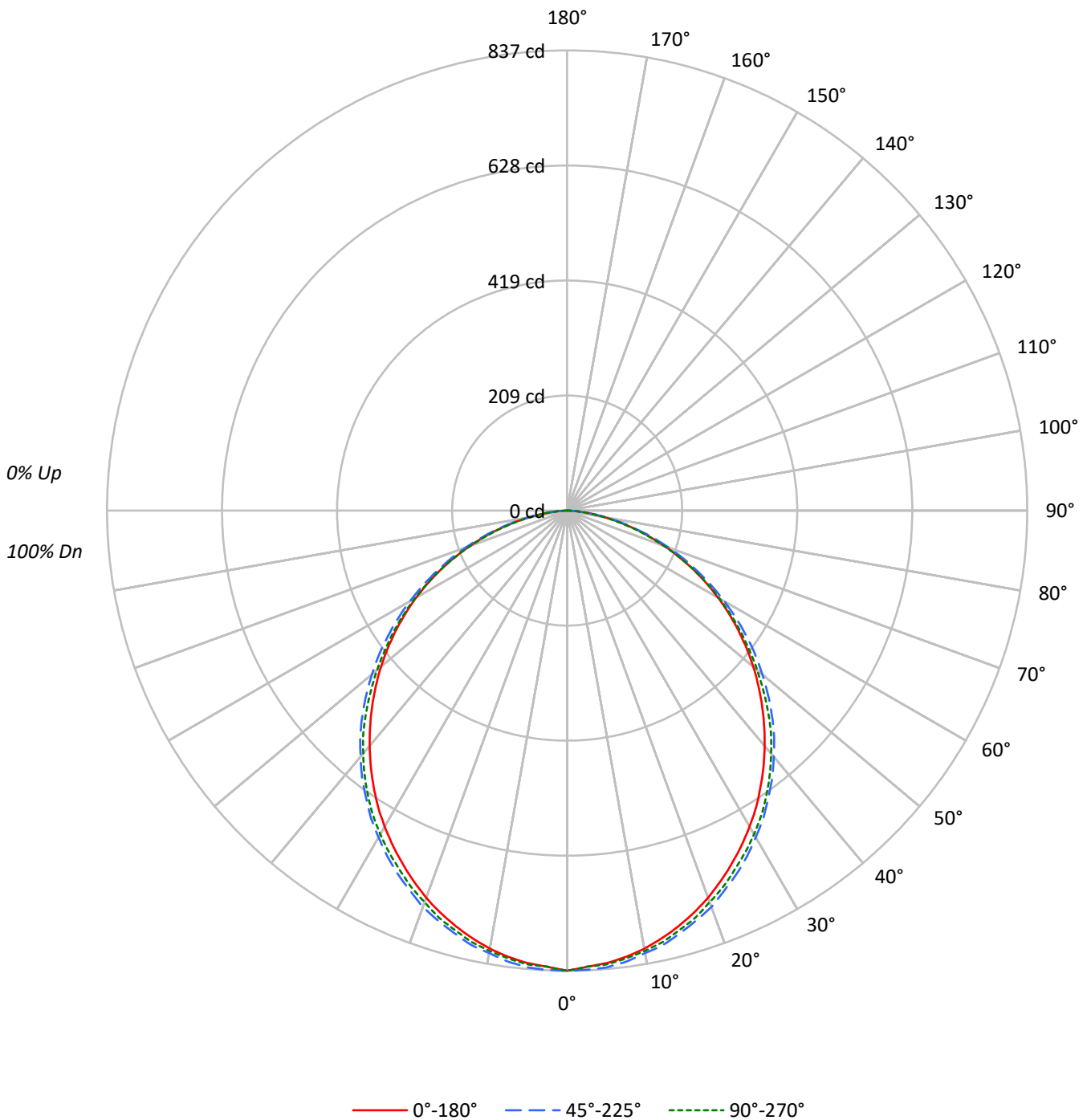
Lumens per Lamp: N/A  
Luminaire Lumens: 2200.6 lumens  
Efficiency: N/A  
Efficacy: 66.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
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°	1126	1126	1126
5°	1116	1126	1119
10°	1106	1117	1111
15°	1090	1108	1100
20°	1073	1099	1085
25°	1052	1083	1070
30°	1031	1066	1056
35°	1008	1048	1038
40°	981	1027	1014
45°	954	1002	983
50°	925	970	945
55°	892	933	905
60°	854	889	862
65°	805	835	805
70°	740	770	732
75°	652	682	642
80°	530	552	524
85°	369	394	384



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.8	3.6
10°-20°	223.4	10.2
20°-30°	333.2	15.1
30°-40°	394.8	17.9
40°-50°	399.5	18.2
50°-60°	348.9	15.9
60°-70°	255.0	11.6
70°-80°	135.7	6.2
80°-90°	31.4	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°	635.4	28.9
0°-40°	1030.2	46.8
0°-60°	1778.6	80.8
0°-90°	2200.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2200.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	837	837	837	837	837	
5°	826	828	834	836	829	78
15°	783	788	795	800	790	221
25°	709	718	729	732	721	327
35°	614	623	638	642	632	384
45°	501	510	527	527	517	387
55°	380	388	398	392	386	340
65°	253	258	262	257	253	250
75°	125	128	131	126	124	133
85°	24	24	26	26	25	30
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	837.0	837.0	837.0	837.0	837.0
2.5°	830.5	833.2	836.0	837.2	830.4
5°	826.1	827.7	833.9	835.8	828.7
7.5°	819.0	821.3	827.3	828.2	821.4
10°	809.2	813.4	817.4	821.8	813.5
12.5°	796.7	802.4	809.2	810.0	803.7
15°	782.7	787.9	795.3	800.1	789.8
17.5°	767.0	772.1	781.7	782.5	776.2
20°	749.5	755.8	767.3	769.3	758.0
22.5°	729.6	738.0	747.6	749.6	741.3
25°	708.7	717.5	729.3	732.0	721.0
27.5°	686.9	695.3	708.7	710.6	701.2
30°	663.6	671.4	686.1	689.3	679.8
32.5°	639.9	647.7	663.9	666.6	657.4
35°	613.5	623.1	637.8	642.3	631.9
37.5°	586.7	596.0	612.7	616.7	605.6
40°	558.8	568.1	584.6	587.9	577.1
42.5°	530.4	539.6	557.3	557.8	548.9
45°	501.4	510.3	526.7	527.1	516.7
47.5°	471.9	480.9	495.5	493.9	484.1
50°	442.1	450.6	463.4	460.1	451.3
52.5°	411.2	419.5	431.6	426.2	417.9
55°	380.1	387.8	397.9	392.2	385.7
57.5°	348.8	356.6	364.4	358.5	352.9
60°	317.3	324.1	330.4	324.5	320.2
62.5°	285.2	291.0	296.5	290.8	286.8
65°	252.7	257.9	262.4	257.2	252.9
67.5°	220.5	224.8	229.0	223.6	219.2
70°	188.2	191.9	195.8	190.2	186.1
72.5°	156.4	159.7	163.1	157.7	154.1
75°	125.4	128.3	131.1	126.3	123.5
77.5°	95.8	98.3	100.2	97.2	94.4
80°	68.4	70.2	71.3	70.1	67.6
82.5°	44.0	45.3	45.9	45.8	44.1
85°	23.9	24.3	25.5	25.7	24.9
87.5°	9.2	9.9	10.1	10.9	10.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)