

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: P489678

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-3STD-40-120-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: P489678  
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-LD4-3STD-40-120-EDD-90  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

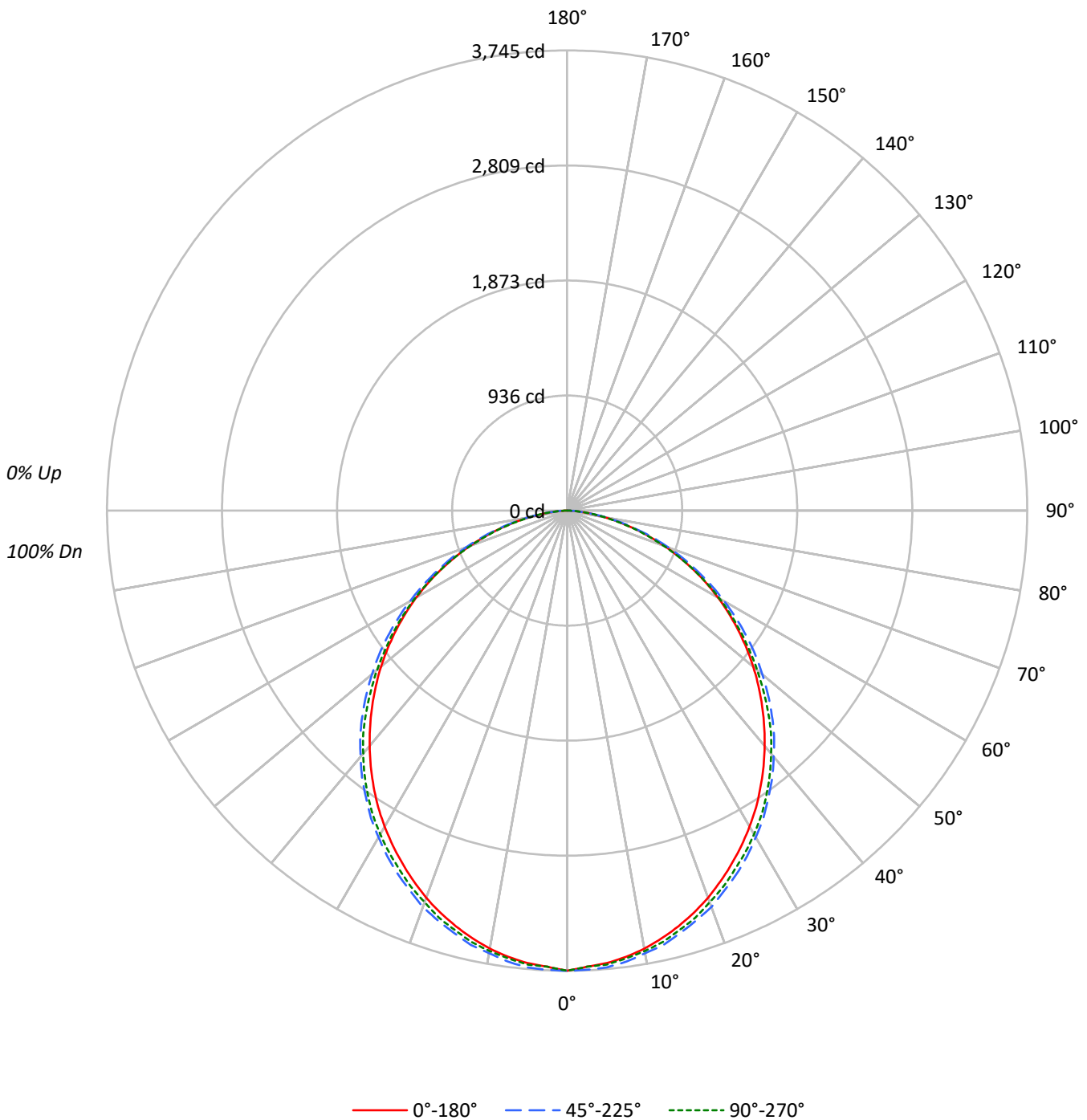
Lumens per Lamp: N/A  
Luminaire Lumens: 9846.3 lumens  
Efficiency: N/A  
Efficacy: 98.6 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
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°	5039	5039	5039
5°	4992	5039	5008
10°	4947	4997	4973
15°	4878	4957	4922
20°	4802	4916	4856
25°	4708	4845	4789
30°	4613	4769	4726
35°	4509	4688	4644
40°	4392	4594	4536
45°	4269	4484	4399
50°	4140	4340	4227
55°	3990	4177	4049
60°	3820	3979	3856
65°	3600	3738	3603
70°	3313	3446	3276
75°	2917	3049	2872
80°	2370	2473	2343
85°	1650	1758	1717



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	352.7	3.6
10°-20°	999.5	10.2
20°-30°	1490.8	15.1
30°-40°	1766.6	17.9
40°-50°	1787.5	18.2
50°-60°	1561.1	15.9
60°-70°	1140.8	11.6
70°-80°	607.0	6.2
80°-90°	140.3	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°	2843.0	28.9
0°-40°	4609.6	46.8
0°-60°	7958.2	80.8
0°-90°	9846.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9846.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3745	3745	3745	3745	3745	
5°	3696	3703	3731	3740	3708	350
15°	3502	3526	3559	3580	3534	987
25°	3171	3210	3263	3275	3226	1461
35°	2745	2788	2854	2874	2827	1717
45°	2243	2283	2356	2358	2312	1731
55°	1701	1735	1780	1755	1726	1520
65°	1131	1154	1174	1151	1132	1119
75°	561	574	586	565	552	597
85°	107	109	114	115	111	135
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3745.2	3745.2	3745.2	3745.2	3745.2
2.5°	3715.9	3728.0	3740.5	3746.0	3715.5
5°	3696.4	3703.4	3731.1	3739.7	3708.1
7.5°	3664.4	3674.9	3701.9	3705.8	3675.3
10°	3620.7	3639.4	3657.4	3676.9	3639.8
12.5°	3564.9	3590.3	3620.7	3624.2	3596.1
15°	3502.1	3525.5	3558.7	3580.1	3533.7
17.5°	3431.8	3454.5	3497.4	3501.3	3473.2
20°	3353.4	3381.5	3433.0	3442.0	3391.7
22.5°	3264.5	3302.3	3345.2	3353.8	3316.7
25°	3171.2	3210.2	3263.3	3275.4	3225.8
27.5°	3073.6	3111.1	3170.8	3179.4	3137.6
30°	2969.1	3004.2	3069.7	3084.2	3041.6
32.5°	2862.9	2898.0	2970.6	2982.7	2941.4
35°	2745.1	2788.0	2854.0	2873.9	2827.4
37.5°	2624.9	2666.7	2741.6	2759.5	2709.6
40°	2500.4	2541.8	2615.5	2630.4	2582.4
42.5°	2373.2	2414.6	2493.4	2495.7	2455.9
45°	2243.3	2283.1	2356.4	2358.4	2312.0
47.5°	2111.4	2151.6	2217.1	2209.7	2166.0
50°	1977.9	2016.2	2073.5	2058.7	2019.3
52.5°	1839.8	1876.9	1931.1	1906.9	1869.9
55°	1700.9	1735.2	1780.5	1754.7	1725.9
57.5°	1560.8	1595.5	1630.3	1604.1	1579.2
60°	1419.6	1450.0	1478.5	1452.0	1432.8
62.5°	1276.0	1302.1	1326.7	1301.3	1283.4
65°	1130.8	1153.8	1174.1	1150.7	1131.6
67.5°	986.4	1005.9	1024.7	1000.5	980.6
70°	842.1	858.8	876.0	851.0	832.7
72.5°	699.6	714.5	729.7	705.5	689.5
75°	561.1	574.0	586.5	565.0	552.5
77.5°	428.8	439.8	448.3	434.7	422.6
80°	305.9	314.1	319.2	313.7	302.4
82.5°	196.7	202.5	205.2	204.9	197.4
85°	106.9	108.9	113.9	115.1	111.2
87.5°	41.4	44.1	45.3	48.8	44.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)