

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: P489699

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-4LO-30-120-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: P489699  
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-LD4-4LO-30-120-EDD  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

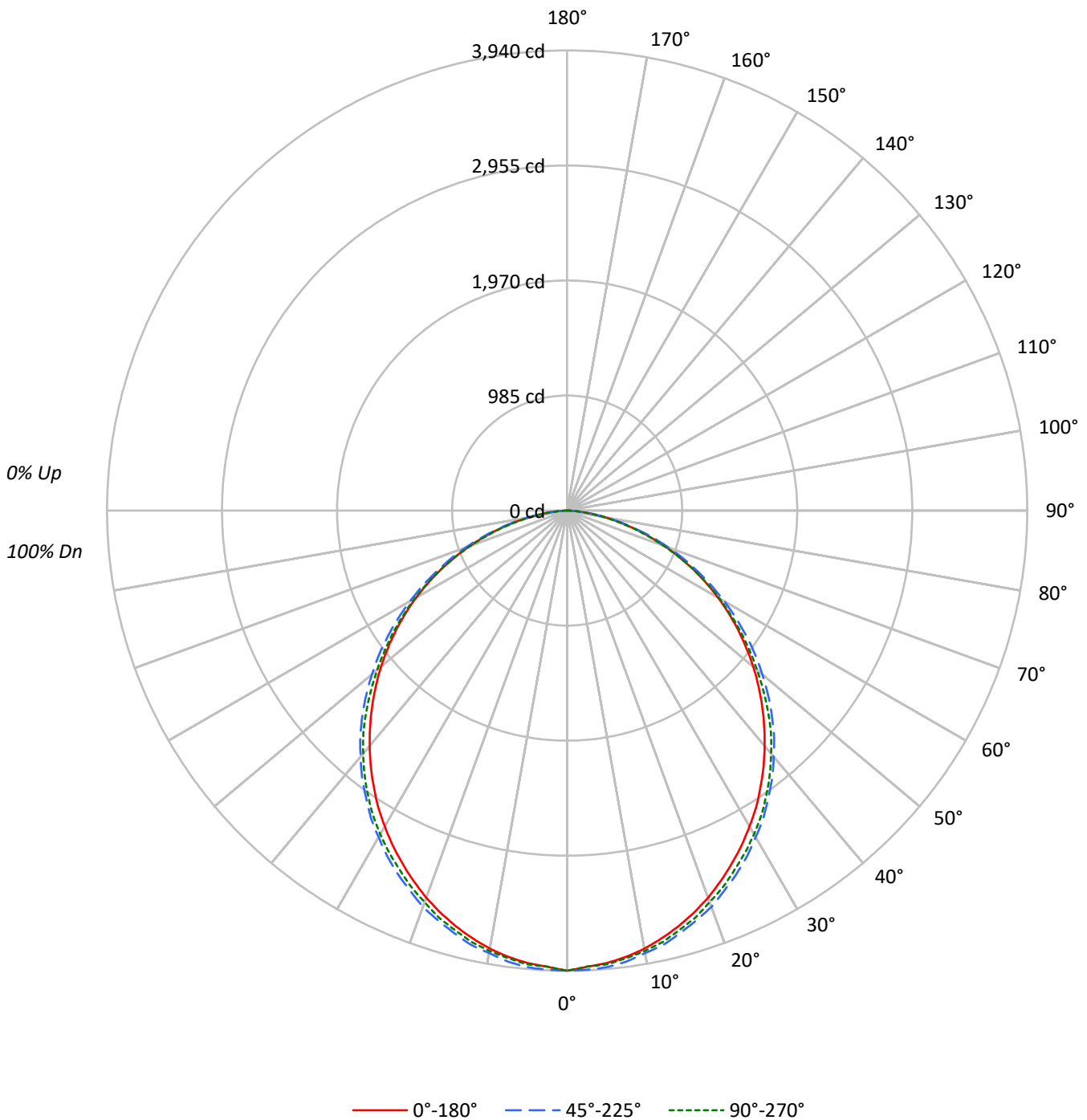
Lumens per Lamp: N/A  
Luminaire Lumens: 10357.4 lumens  
Efficiency: N/A  
Efficacy: 110.7 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 93.6  
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°	5301	5301	5301
5°	5252	5301	5268
10°	5203	5256	5231
15°	5131	5214	5178
20°	5051	5171	5108
25°	4952	5096	5038
30°	4852	5017	4971
35°	4743	4931	4885
40°	4620	4832	4771
45°	4490	4717	4628
50°	4355	4566	4446
55°	4197	4393	4259
60°	4018	4185	4056
65°	3787	3932	3790
70°	3485	3625	3446
75°	3068	3207	3021
80°	2493	2602	2465
85°	1737	1851	1806



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	371.0	3.6
10°-20°	1051.4	10.2
20°-30°	1568.1	15.1
30°-40°	1858.3	17.9
40°-50°	1880.3	18.2
50°-60°	1642.1	15.9
60°-70°	1200.0	11.6
70°-80°	638.5	6.2
80°-90°	147.6	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°	2990.6	28.9
0°-40°	4848.9	46.8
0°-60°	8371.3	80.8
0°-90°	10357.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10357.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3940	3940	3940	3940	3940	
5°	3888	3896	3925	3934	3901	369
15°	3684	3708	3743	3766	3717	1039
25°	3336	3377	3433	3445	3393	1537
35°	2888	2933	3002	3023	2974	1806
45°	2360	2402	2479	2481	2432	1820
55°	1789	1825	1873	1846	1816	1599
65°	1190	1214	1235	1210	1190	1177
75°	590	604	617	594	581	628
85°	112	114	120	121	117	142
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3939.6	3939.6	3939.6	3939.6	3939.6
2.5°	3908.8	3921.5	3934.7	3940.4	3908.4
5°	3888.3	3895.7	3924.8	3933.8	3900.6
7.5°	3854.6	3865.7	3894.0	3898.1	3866.1
10°	3808.6	3828.4	3847.2	3867.8	3828.8
12.5°	3750.0	3776.6	3808.6	3812.3	3782.8
15°	3683.9	3708.5	3743.4	3766.0	3717.1
17.5°	3610.0	3633.8	3678.9	3683.0	3653.5
20°	3527.5	3557.0	3611.2	3620.7	3567.7
22.5°	3433.9	3473.7	3518.9	3527.9	3488.9
25°	3335.8	3376.8	3432.7	3445.4	3393.3
27.5°	3233.2	3272.6	3335.4	3344.4	3300.5
30°	3123.2	3160.1	3229.1	3244.3	3199.5
32.5°	3011.5	3048.5	3124.8	3137.5	3094.0
35°	2887.6	2932.7	3002.1	3023.0	2974.2
37.5°	2761.2	2805.1	2883.9	2902.8	2850.2
40°	2630.2	2673.7	2751.3	2766.9	2716.4
42.5°	2496.4	2539.9	2622.8	2625.3	2583.4
45°	2359.7	2401.6	2478.8	2480.8	2432.0
47.5°	2221.0	2263.3	2332.2	2324.4	2278.5
50°	2080.6	2120.8	2181.2	2165.6	2124.1
52.5°	1935.3	1974.3	2031.4	2005.9	1966.9
55°	1789.2	1825.3	1872.9	1845.8	1815.5
57.5°	1641.8	1678.4	1714.9	1687.4	1661.1
60°	1493.3	1525.3	1555.2	1527.3	1507.2
62.5°	1342.2	1369.7	1395.6	1368.9	1350.0
65°	1189.5	1213.7	1235.1	1210.4	1190.3
67.5°	1037.6	1058.2	1077.9	1052.4	1031.5
70°	885.8	903.4	921.5	895.2	875.9
72.5°	736.0	751.6	767.6	742.1	725.3
75°	590.2	603.8	616.9	594.3	581.2
77.5°	451.1	462.6	471.6	457.3	444.5
80°	321.8	330.4	335.8	330.0	318.1
82.5°	206.9	213.0	215.9	215.5	207.7
85°	112.5	114.5	119.9	121.1	117.0
87.5°	43.5	46.4	47.6	51.3	47.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)