

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: P489708

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-4STD-27-120-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: P489708  
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-90  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

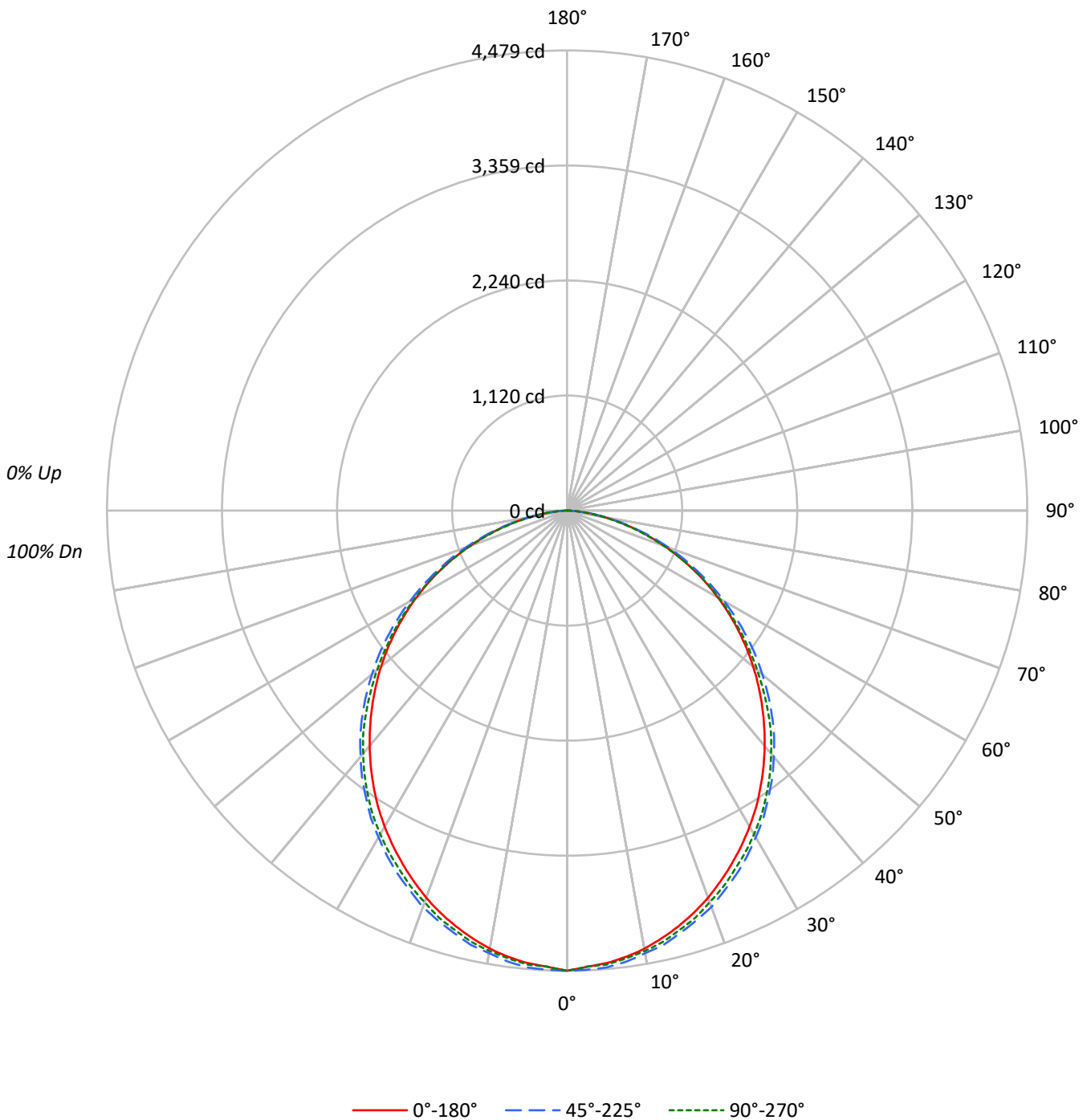
Lumens per Lamp: N/A  
Luminaire Lumens: 11776.2 lumens  
Efficiency: N/A  
Efficacy: 88.4 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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	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°	6027	6027	6027
5°	5971	6027	5990
10°	5916	5976	5948
15°	5834	5929	5887
20°	5743	5879	5808
25°	5631	5794	5728
30°	5517	5704	5652
35°	5393	5606	5554
40°	5253	5494	5425
45°	5105	5363	5261
50°	4952	5191	5055
55°	4772	4995	4842
60°	4569	4758	4612
65°	4306	4471	4309
70°	3962	4122	3918
75°	3489	3646	3435
80°	2835	2958	2803
85°	1974	2104	2053



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	421.9	3.6
10°-20°	1195.5	10.2
20°-30°	1783.0	15.1
30°-40°	2112.8	17.9
40°-50°	2137.8	18.2
50°-60°	1867.1	15.9
60°-70°	1364.4	11.6
70°-80°	726.0	6.2
80°-90°	167.8	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°	3400.3	28.9
0°-40°	5513.1	46.8
0°-60°	9518.0	80.8
0°-90°	11776.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11776.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4479	4479	4479	4479	4479	
5°	4421	4429	4462	4473	4435	419
15°	4188	4216	4256	4282	4226	1181
25°	3793	3839	3903	3917	3858	1747
35°	3283	3334	3413	3437	3382	2053
45°	2683	2731	2818	2821	2765	2070
55°	2034	2075	2130	2099	2064	1818
65°	1352	1380	1404	1376	1353	1338
75°	671	686	701	676	661	714
85°	128	130	136	138	133	162
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4479.2	4479.2	4479.2	4479.2	4479.2
2.5°	4444.2	4458.7	4473.6	4480.2	4443.8
5°	4420.9	4429.3	4462.4	4472.7	4434.9
7.5°	4382.6	4395.2	4427.4	4432.1	4395.7
10°	4330.4	4352.8	4374.2	4397.6	4353.2
12.5°	4263.6	4294.0	4330.4	4334.6	4301.0
15°	4188.5	4216.5	4256.2	4281.8	4226.3
17.5°	4104.5	4131.6	4182.9	4187.6	4154.0
20°	4010.7	4044.3	4105.9	4116.6	4056.4
22.5°	3904.3	3949.6	4000.9	4011.2	3966.8
25°	3792.8	3839.4	3902.9	3917.4	3858.1
27.5°	3676.1	3720.9	3792.3	3802.6	3752.6
30°	3551.0	3593.0	3671.4	3688.7	3637.8
32.5°	3424.1	3466.1	3552.9	3567.3	3517.9
35°	3283.1	3334.5	3413.3	3437.1	3381.6
37.5°	3139.4	3189.3	3278.9	3300.4	3240.7
40°	2990.5	3040.0	3128.2	3145.9	3088.5
42.5°	2838.4	2887.8	2982.1	2984.9	2937.3
45°	2683.0	2730.6	2818.3	2820.6	2765.1
47.5°	2525.2	2573.3	2651.7	2642.8	2590.6
50°	2365.6	2411.4	2480.0	2462.2	2415.1
52.5°	2200.4	2244.8	2309.6	2280.7	2236.4
55°	2034.3	2075.4	2129.5	2098.7	2064.1
57.5°	1866.7	1908.3	1949.8	1918.5	1888.7
60°	1697.8	1734.2	1768.3	1736.5	1713.7
62.5°	1526.1	1557.3	1586.7	1556.4	1534.9
65°	1352.5	1380.0	1404.3	1376.3	1353.4
67.5°	1179.8	1203.1	1225.5	1196.6	1172.8
70°	1007.1	1027.2	1047.7	1017.8	995.9
72.5°	836.8	854.5	872.7	843.8	824.6
75°	671.1	686.5	701.4	675.8	660.8
77.5°	512.9	526.0	536.2	519.9	505.4
80°	365.9	375.7	381.7	375.2	361.7
82.5°	235.2	242.2	245.5	245.0	236.1
85°	127.9	130.2	136.3	137.7	133.0
87.5°	49.5	52.7	54.1	58.3	53.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)