

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: P489654

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-3HI-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: P489654  
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-LD4-3HI-40-120-EDD-90  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

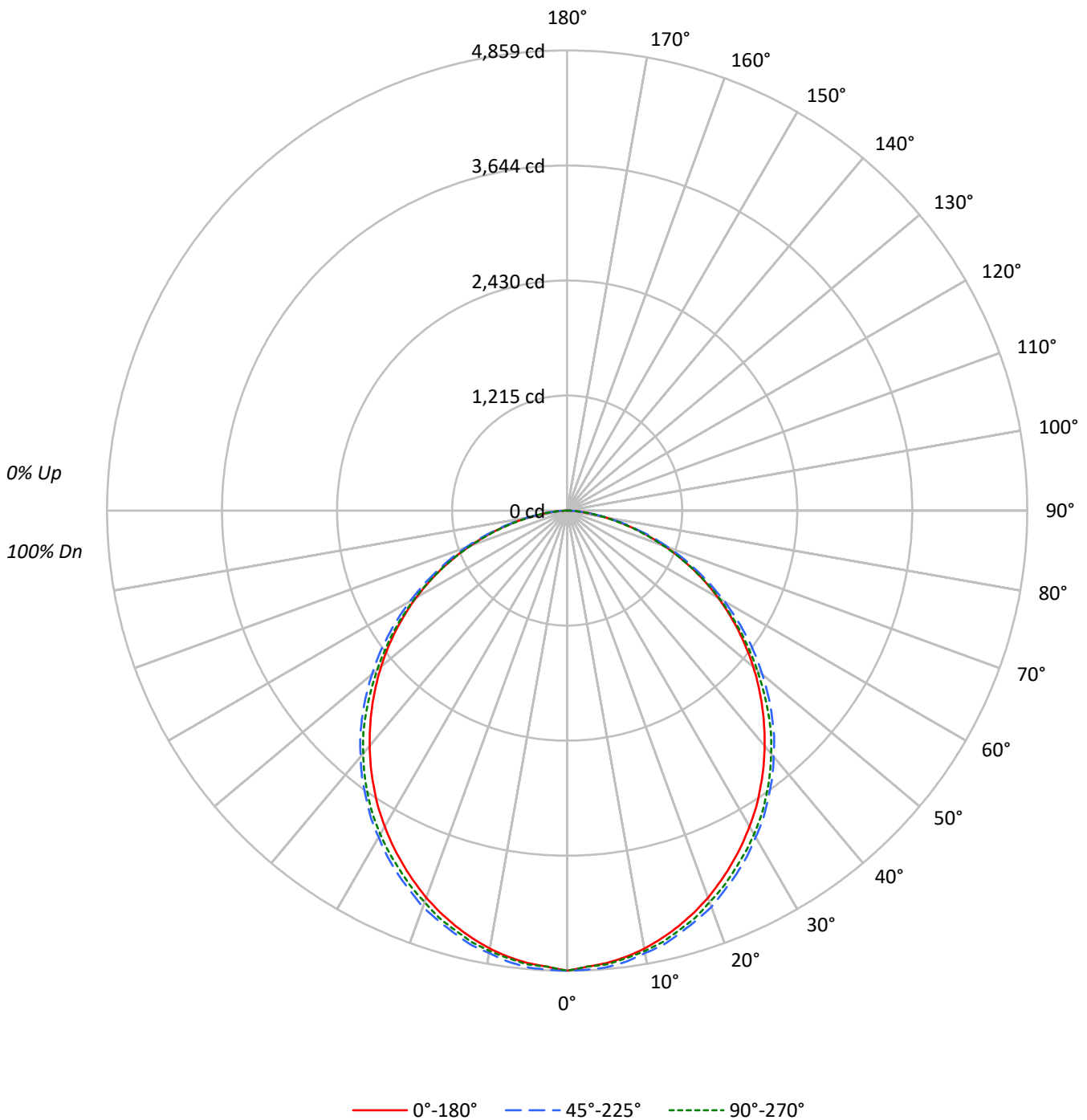
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12773.6 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): 129.6  
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°	6537	6537	6537
5°	6477	6538	6497
10°	6417	6482	6451
15°	6329	6431	6386
20°	6229	6377	6300
25°	6108	6285	6213
30°	5984	6187	6130
35°	5849	6081	6025
40°	5697	5960	5884
45°	5538	5817	5707
50°	5371	5631	5483
55°	5176	5418	5252
60°	4956	5161	5002
65°	4670	4849	4674
70°	4297	4471	4250
75°	3784	3955	3726
80°	3075	3209	3040
85°	2141	2282	2228



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	457.6	3.6
10°-20°	1296.7	10.2
20°-30°	1934.0	15.1
30°-40°	2291.8	17.9
40°-50°	2318.9	18.2
50°-60°	2025.2	15.9
60°-70°	1479.9	11.6
70°-80°	787.4	6.2
80°-90°	182.0	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°	3688.3	28.9
0°-40°	5980.0	46.8
0°-60°	10324.2	80.8
0°-90°	12773.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12773.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4859	4859	4859	4859	4859	
5°	4795	4804	4840	4852	4810	455
15°	4543	4574	4617	4644	4584	1281
25°	4114	4165	4234	4249	4185	1895
35°	3561	3617	3702	3728	3668	2227
45°	2910	2962	3057	3060	2999	2245
55°	2207	2251	2310	2276	2239	1972
65°	1467	1497	1523	1493	1468	1452
75°	728	745	761	733	717	774
85°	139	141	148	149	144	176
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4858.6	4858.6	4858.6	4858.6	4858.6
2.5°	4820.7	4836.3	4852.5	4859.6	4820.2
5°	4795.3	4804.5	4840.4	4851.5	4810.5
7.5°	4753.8	4767.5	4802.4	4807.5	4768.0
10°	4697.1	4721.4	4744.7	4770.0	4721.9
12.5°	4624.8	4657.7	4697.1	4701.7	4665.2
15°	4543.3	4573.6	4616.7	4644.5	4584.3
17.5°	4452.1	4481.5	4537.2	4542.2	4505.8
20°	4350.4	4386.8	4453.7	4465.3	4400.0
22.5°	4235.0	4284.1	4339.8	4350.9	4302.8
25°	4114.0	4164.6	4233.5	4249.1	4184.9
27.5°	3987.4	4036.0	4113.5	4124.6	4070.5
30°	3851.8	3897.3	3982.4	4001.1	3945.9
32.5°	3714.1	3759.6	3853.8	3869.5	3815.8
35°	3561.2	3616.9	3702.4	3728.3	3668.0
37.5°	3405.3	3459.5	3556.6	3579.9	3515.1
40°	3243.8	3297.5	3393.1	3412.4	3350.1
42.5°	3078.8	3132.4	3234.7	3237.7	3186.1
45°	2910.2	2961.8	3057.0	3059.5	2999.3
47.5°	2739.1	2791.3	2876.3	2866.7	2810.0
50°	2566.0	2615.6	2690.0	2670.8	2619.6
52.5°	2386.8	2434.9	2505.2	2473.9	2425.8
55°	2206.6	2251.1	2309.8	2276.4	2239.0
57.5°	2024.8	2069.9	2115.0	2081.0	2048.6
60°	1841.6	1881.1	1918.0	1883.6	1858.8
62.5°	1655.3	1689.2	1721.1	1688.2	1664.9
65°	1467.0	1496.9	1523.2	1492.8	1468.0
67.5°	1279.7	1305.0	1329.3	1297.9	1272.1
70°	1092.4	1114.2	1136.4	1104.0	1080.3
72.5°	907.6	926.9	946.6	915.2	894.5
75°	727.9	744.6	760.8	733.0	716.8
77.5°	556.3	570.5	581.6	563.9	548.2
80°	396.9	407.5	414.1	407.0	392.3
82.5°	255.1	262.7	266.3	265.8	256.1
85°	138.7	141.2	147.8	149.3	144.3
87.5°	53.7	57.2	58.7	63.3	58.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)