

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: P489647

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-3HI-20-120-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: P489647  
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-20-120-EDD  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

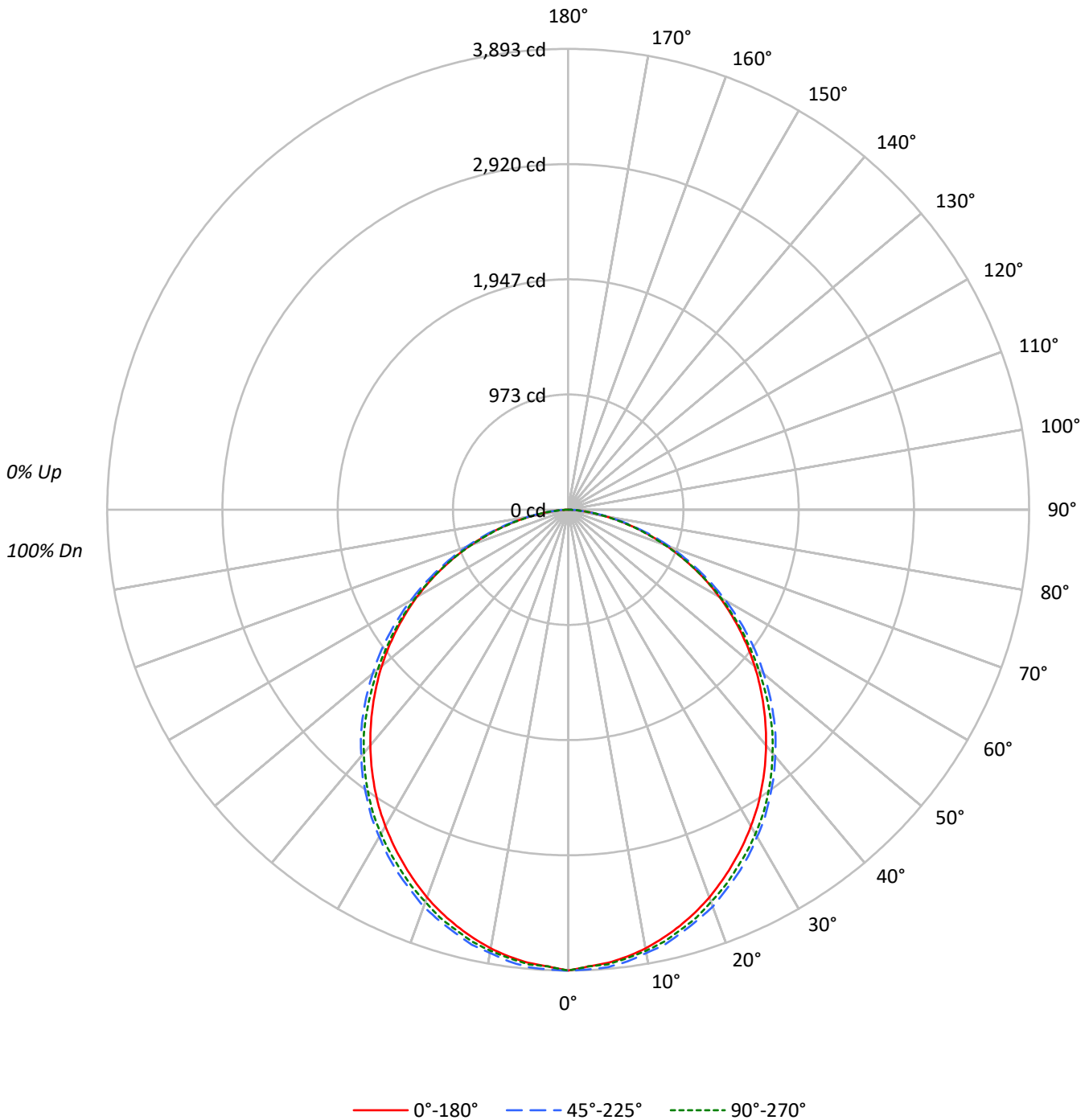
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10235.4 lumens  
Efficiency: N/A  
Efficacy: 79.0 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	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					100			
1	109	105	100	97	106	102	98	95	98	95	92	94	92	89	91	88	87	85					85			
2	99	91	85	79	97	90	83	78	86	81	76	83	78	75	80	76	73	71					71			
3	91	80	72	66	88	79	71	65	76	70	64	73	68	63	71	66	62	60					60			
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51					51			
5	77	64	55	48	75	63	54	48	61	53	48	59	52	47	57	51	47	45					45			
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39					39			
7	66	52	44	38	64	51	43	37	50	43	37	49	42	37	47	41	37	35					35			
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31					31			
9	57	44	36	30	56	43	35	30	42	35	30	41	35	30	40	34	30	28					28			
10	54	41	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25					25			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	5238	5238	5238
5°	5190	5239	5206
10°	5142	5194	5169
15°	5071	5153	5117
20°	4991	5110	5048
25°	4894	5036	4978
30°	4795	4958	4912
35°	4687	4873	4828
40°	4565	4776	4715
45°	4437	4661	4573
50°	4304	4512	4394
55°	4148	4342	4209
60°	3971	4136	4008
65°	3742	3886	3745
70°	3443	3582	3405
75°	3032	3170	2986
80°	2464	2571	2436
85°	1715	1828	1785



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	366.7	3.6
10°-20°	1039.0	10.2
20°-30°	1549.7	15.1
30°-40°	1836.4	17.9
40°-50°	1858.1	18.2
50°-60°	1622.8	15.9
60°-70°	1185.9	11.6
70°-80°	631.0	6.2
80°-90°	145.8	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
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0°-30°	2955.4	28.9
0°-40°	4791.7	46.8
0°-60°	8272.7	80.8
0°-90°	10235.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10235.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3893	3893	3893	3893	3893	
5°	3842	3850	3879	3888	3855	364
15°	3640	3665	3699	3722	3673	1026
25°	3296	3337	3392	3405	3353	1519
35°	2854	2898	2967	2987	2939	1785
45°	2332	2373	2450	2452	2403	1799
55°	1768	1804	1851	1824	1794	1581
65°	1176	1199	1220	1196	1176	1163
75°	583	597	610	587	574	620
85°	111	113	118	120	116	141
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3893.2	3893.2	3893.2	3893.2	3893.2
2.5°	3862.8	3875.3	3888.3	3894.0	3862.4
5°	3842.5	3849.8	3878.6	3887.5	3854.6
7.5°	3809.2	3820.2	3848.2	3852.2	3820.6
10°	3763.8	3783.3	3801.9	3822.2	3783.7
12.5°	3705.8	3732.1	3763.8	3767.4	3738.2
15°	3640.5	3664.8	3699.3	3721.6	3673.3
17.5°	3567.5	3591.0	3635.6	3639.7	3610.5
20°	3485.9	3515.1	3568.7	3578.0	3525.7
22.5°	3393.5	3432.8	3477.4	3486.3	3447.8
25°	3296.5	3337.1	3392.2	3404.8	3353.3
27.5°	3195.1	3234.0	3296.1	3305.0	3261.6
30°	3086.4	3122.9	3191.0	3206.1	3161.8
32.5°	2976.1	3012.6	3088.0	3100.6	3057.6
35°	2853.6	2898.2	2966.7	2987.4	2939.2
37.5°	2728.6	2772.0	2849.9	2868.6	2816.7
40°	2599.2	2642.2	2718.9	2734.3	2684.4
42.5°	2467.0	2510.0	2591.9	2594.4	2553.0
45°	2331.9	2373.3	2449.6	2451.6	2403.3
47.5°	2194.8	2236.6	2304.8	2297.1	2251.6
50°	2056.1	2095.9	2155.5	2140.1	2099.1
52.5°	1912.5	1951.1	2007.4	1982.3	1943.8
55°	1768.1	1803.8	1850.9	1824.1	1794.1
57.5°	1622.5	1658.6	1694.7	1667.5	1641.6
60°	1475.7	1507.3	1536.9	1509.3	1489.5
62.5°	1326.4	1353.6	1379.1	1352.8	1334.1
65°	1175.5	1199.4	1220.5	1196.2	1176.3
67.5°	1025.4	1045.7	1065.2	1040.0	1019.3
70°	875.3	892.8	910.6	884.7	865.6
72.5°	727.3	742.7	758.5	733.4	716.7
75°	583.3	596.7	609.7	587.3	574.4
77.5°	445.8	457.1	466.1	451.9	439.3
80°	318.0	326.5	331.8	326.1	314.4
82.5°	204.4	210.5	213.4	213.0	205.2
85°	111.1	113.2	118.4	119.7	115.6
87.5°	43.0	45.8	47.1	50.7	46.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)