

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: P489587

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-1LO-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: P489587  
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-LD4-1LO-20-120-EDD  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

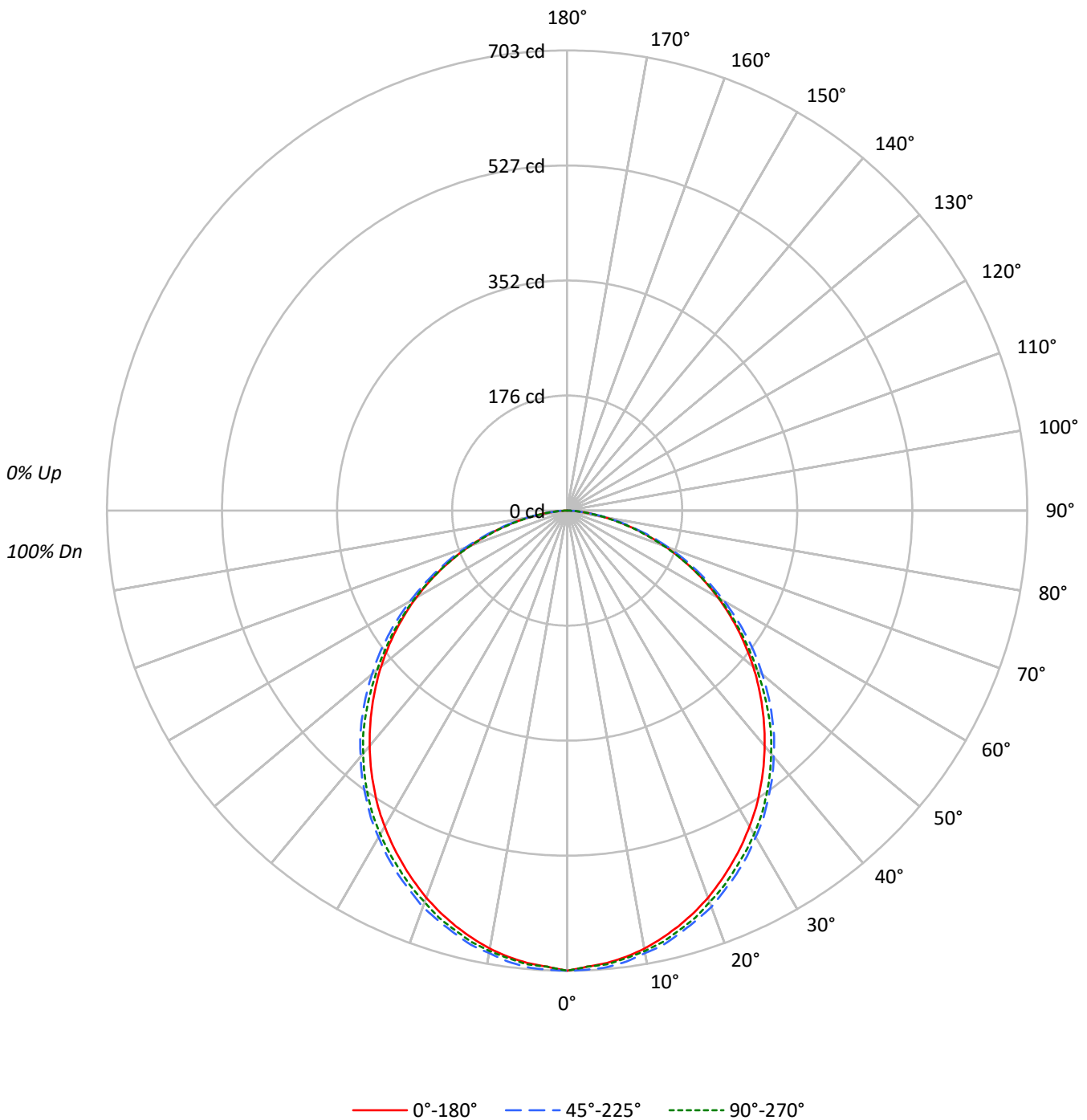
Lumens per Lamp: N/A  
Luminaire Lumens: 1848.1 lumens  
Efficiency: N/A  
Efficacy: 79.0 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
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°	946	946	946
5°	937	946	940
10°	929	938	933
15°	916	930	924
20°	901	923	912
25°	884	909	899
30°	866	895	887
35°	846	880	872
40°	824	862	851
45°	801	842	826
50°	777	815	793
55°	749	784	760
60°	717	747	724
65°	676	702	676
70°	622	647	615
75°	547	572	539
80°	445	464	440
85°	310	330	323



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	66.2	3.6
10°-20°	187.6	10.2
20°-30°	279.8	15.1
30°-40°	331.6	17.9
40°-50°	335.5	18.2
50°-60°	293.0	15.9
60°-70°	214.1	11.6
70°-80°	113.9	6.2
80°-90°	26.3	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°	533.6	28.9
0°-40°	865.2	46.8
0°-60°	1493.7	80.8
0°-90°	1848.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1848.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	703	703	703	703	703	
5°	694	695	700	702	696	66
15°	657	662	668	672	663	185
25°	595	602	612	615	606	274
35°	515	523	536	539	531	322
45°	421	428	442	443	434	325
55°	319	326	334	329	324	285
65°	212	217	220	216	212	210
75°	105	108	110	106	104	112
85°	20	20	21	22	21	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	703.0	703.0	703.0	703.0	703.0
2.5°	697.5	699.7	702.1	703.1	697.4
5°	693.8	695.1	700.3	701.9	696.0
7.5°	687.8	689.8	694.8	695.6	689.8
10°	679.6	683.1	686.5	690.1	683.2
12.5°	669.1	673.9	679.6	680.2	675.0
15°	657.3	661.7	667.9	672.0	663.3
17.5°	644.1	648.4	656.4	657.2	651.9
20°	629.4	634.7	644.4	646.0	636.6
22.5°	612.7	619.8	627.9	629.5	622.5
25°	595.2	602.5	612.5	614.8	605.5
27.5°	576.9	583.9	595.1	596.8	588.9
30°	557.3	563.9	576.2	578.9	570.9
32.5°	537.4	543.9	557.6	559.8	552.1
35°	515.2	523.3	535.7	539.4	530.7
37.5°	492.7	500.5	514.6	517.9	508.6
40°	469.3	477.1	490.9	493.7	484.7
42.5°	445.4	453.2	468.0	468.4	461.0
45°	421.1	428.5	442.3	442.7	433.9
47.5°	396.3	403.8	416.1	414.8	406.6
50°	371.3	378.4	389.2	386.4	379.0
52.5°	345.3	352.3	362.5	357.9	351.0
55°	319.3	325.7	334.2	329.4	323.9
57.5°	293.0	299.5	306.0	301.1	296.4
60°	266.4	272.2	277.5	272.5	268.9
62.5°	239.5	244.4	249.0	244.3	240.9
65°	212.2	216.6	220.4	216.0	212.4
67.5°	185.1	188.8	192.3	187.8	184.1
70°	158.1	161.2	164.4	159.7	156.3
72.5°	131.3	134.1	137.0	132.4	129.4
75°	105.3	107.7	110.1	106.1	103.7
77.5°	80.5	82.5	84.2	81.6	79.3
80°	57.4	59.0	59.9	58.9	56.8
82.5°	36.9	38.0	38.5	38.5	37.1
85°	20.1	20.4	21.4	21.6	20.9
87.5°	7.8	8.3	8.5	9.2	8.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)