

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: P488651

Luminaire Tested: **CLM-12-4-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: P488651  
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-12-4-INS-A19156-LD4-1LO-20-120-EDD  
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

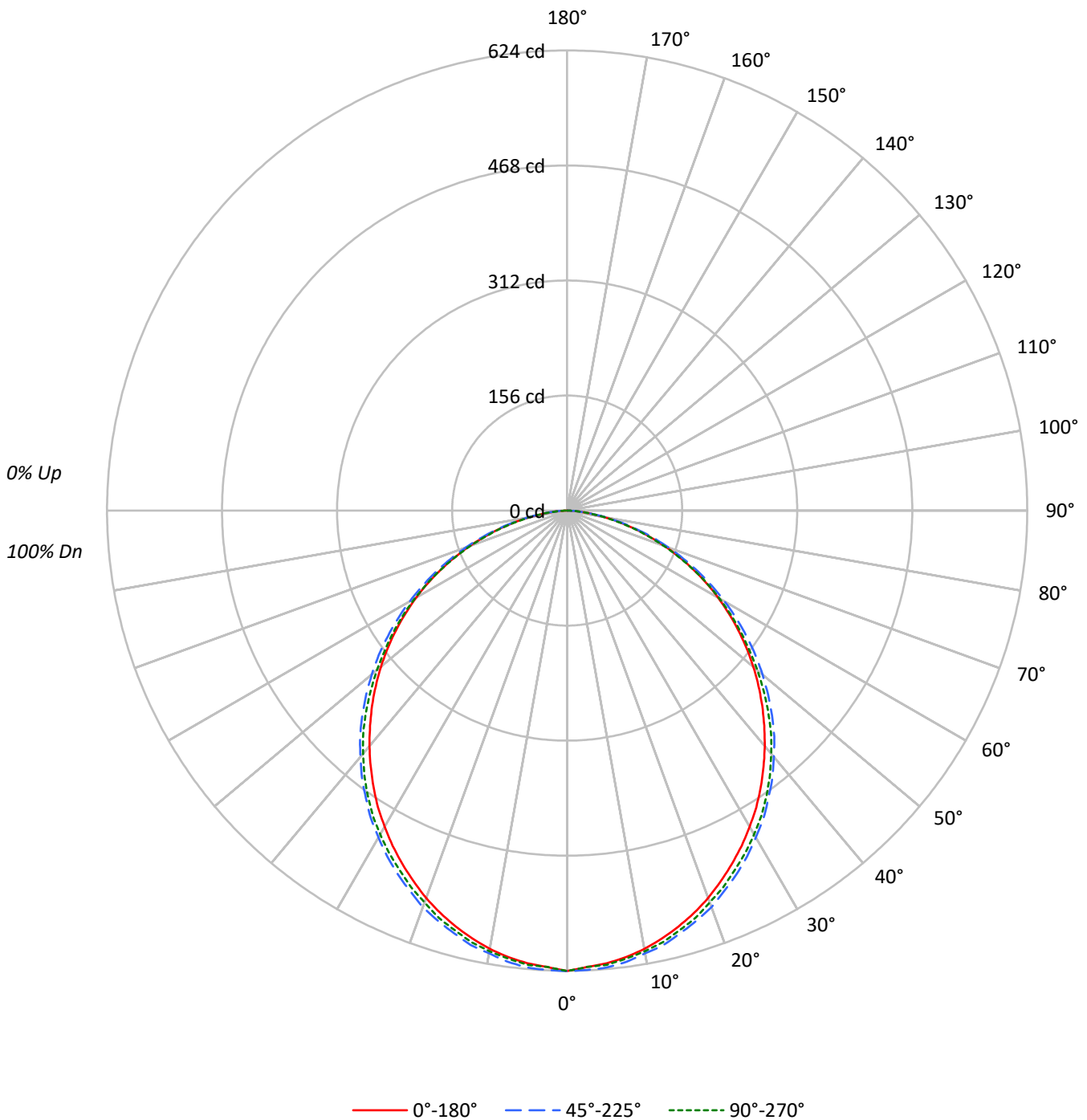
Lumens per Lamp: N/A  
Luminaire Lumens: 1641.5 lumens  
Efficiency: N/A  
Efficacy: 70.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	1680	1680	1680
5°	1665	1680	1670
10°	1649	1666	1658
15°	1626	1653	1641
20°	1601	1639	1619
25°	1570	1615	1597
30°	1538	1590	1576
35°	1503	1563	1549
40°	1464	1532	1512
45°	1423	1495	1467
50°	1380	1447	1409
55°	1331	1392	1350
60°	1274	1327	1286
65°	1200	1246	1202
70°	1105	1149	1092
75°	972	1017	958
80°	790	824	781
85°	550	587	571



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.8	3.6
10°-20°	166.6	10.2
20°-30°	248.5	15.1
30°-40°	294.5	17.9
40°-50°	298.0	18.2
50°-60°	260.3	15.9
60°-70°	190.2	11.6
70°-80°	101.2	6.2
80°-90°	23.4	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°	474.0	28.9
0°-40°	768.5	46.8
0°-60°	1326.7	80.8
0°-90°	1641.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1641.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	624	624	624	624	624	
5°	616	617	622	624	618	58
15°	584	588	593	597	589	165
25°	529	535	544	546	538	244
35°	458	465	476	479	471	286
45°	374	381	393	393	385	289
55°	284	289	297	292	288	253
65°	188	192	196	192	189	187
75°	94	96	98	94	92	99
85°	18	18	19	19	18	23
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	624.4	624.4	624.4	624.4	624.4
2.5°	619.5	621.5	623.6	624.5	619.4
5°	616.2	617.4	622.0	623.5	618.2
7.5°	610.9	612.7	617.1	617.8	612.7
10°	603.6	606.7	609.7	613.0	606.8
12.5°	594.3	598.5	603.6	604.2	599.5
15°	583.8	587.7	593.3	596.9	589.1
17.5°	572.1	575.9	583.1	583.7	579.0
20°	559.1	563.7	572.3	573.8	565.4
22.5°	544.2	550.5	557.7	559.1	552.9
25°	528.7	535.2	544.0	546.0	537.8
27.5°	512.4	518.7	528.6	530.0	523.1
30°	495.0	500.8	511.8	514.2	507.1
32.5°	477.3	483.1	495.2	497.3	490.4
35°	457.6	464.8	475.8	479.1	471.4
37.5°	437.6	444.6	457.1	460.0	451.7
40°	416.9	423.7	436.0	438.5	430.5
42.5°	395.6	402.5	415.7	416.1	409.4
45°	374.0	380.6	392.8	393.2	385.4
47.5°	352.0	358.7	369.6	368.4	361.1
50°	329.7	336.1	345.7	343.2	336.6
52.5°	306.7	312.9	321.9	317.9	311.7
55°	283.6	289.3	296.8	292.5	287.7
57.5°	260.2	266.0	271.8	267.4	263.3
60°	236.7	241.7	246.5	242.1	238.9
62.5°	212.7	217.1	221.2	216.9	214.0
65°	188.5	192.4	195.7	191.8	188.7
67.5°	164.5	167.7	170.8	166.8	163.5
70°	140.4	143.2	146.0	141.9	138.8
72.5°	116.6	119.1	121.6	117.6	114.9
75°	93.5	95.7	97.8	94.2	92.1
77.5°	71.5	73.3	74.7	72.5	70.5
80°	51.0	52.4	53.2	52.3	50.4
82.5°	32.8	33.8	34.2	34.2	32.9
85°	17.8	18.1	19.0	19.2	18.5
87.5°	6.9	7.4	7.5	8.1	7.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)