

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: P489068

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-1STD-50-120-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: P489068  
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-24-2-INS-A19156-LD4-1STD-50-120-EDD-90  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

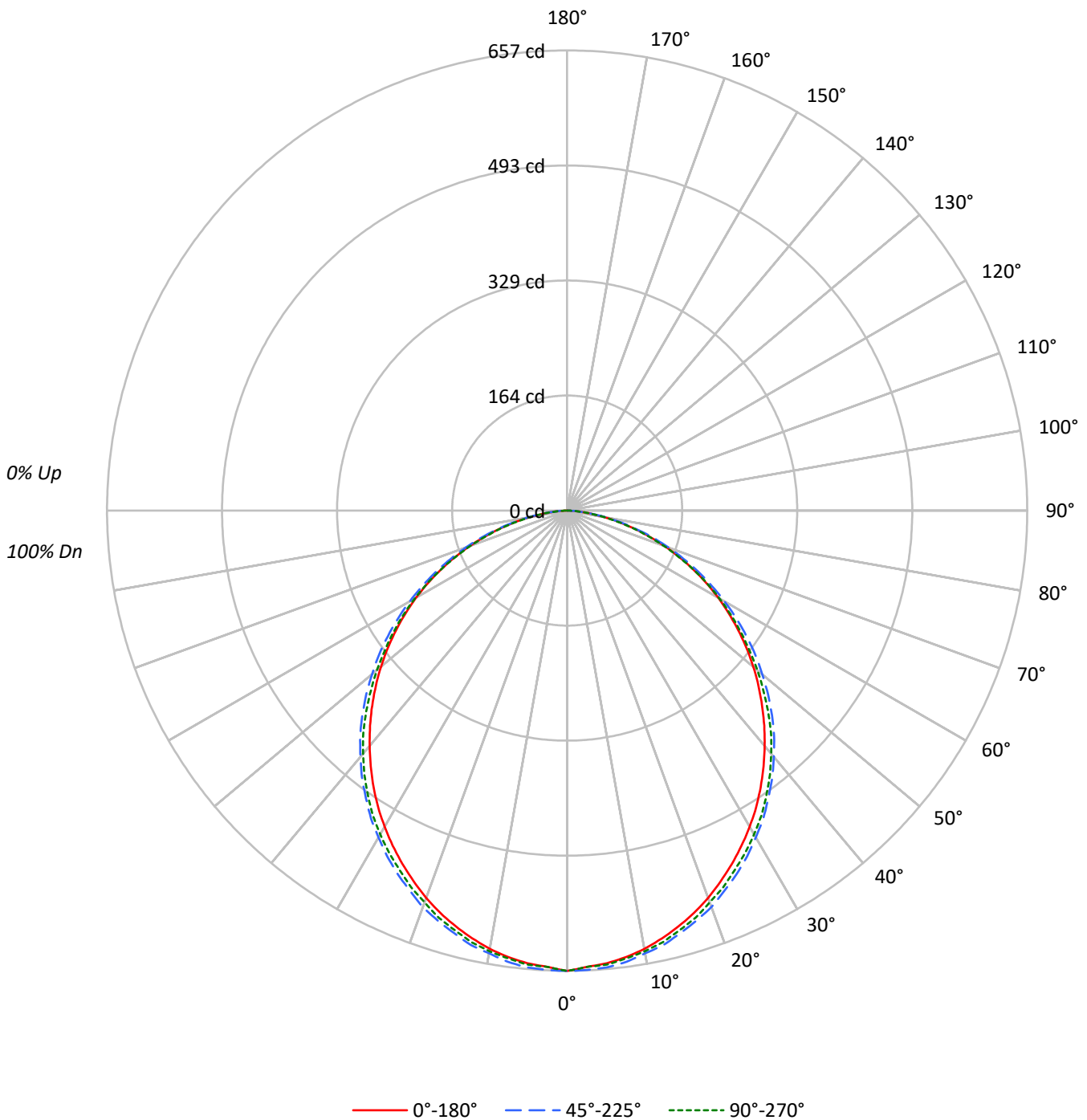
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1728.0 lumens  
Efficiency: N/A  
Efficacy: 104.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
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°	1769	1769	1769
5°	1752	1769	1758
10°	1736	1754	1746
15°	1712	1740	1728
20°	1685	1725	1704
25°	1652	1700	1681
30°	1619	1674	1659
35°	1583	1645	1630
40°	1541	1612	1592
45°	1498	1574	1544
50°	1453	1523	1484
55°	1400	1466	1421
60°	1341	1397	1354
65°	1264	1312	1265
70°	1163	1209	1149
75°	1024	1070	1009
80°	832	868	823
85°	580	618	602



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.9	3.6
10°-20°	175.4	10.2
20°-30°	261.6	15.1
30°-40°	310.0	17.9
40°-50°	313.7	18.2
50°-60°	274.0	15.9
60°-70°	200.2	11.6
70°-80°	106.5	6.2
80°-90°	24.6	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°	498.9	28.9
0°-40°	809.0	46.8
0°-60°	1396.6	80.8
0°-90°	1728.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1728.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	657	657	657	657	657	
5°	649	650	655	656	651	62
15°	615	619	624	628	620	173
25°	556	563	573	575	566	256
35°	482	489	501	504	496	301
45°	394	401	414	414	406	304
55°	298	304	312	308	303	267
65°	198	202	206	202	199	196
75°	98	101	103	99	97	105
85°	19	19	20	20	20	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	657.3	657.3	657.3	657.3	657.3
2.5°	652.1	654.3	656.4	657.4	652.1
5°	648.7	649.9	654.8	656.3	650.8
7.5°	643.1	644.9	649.7	650.4	645.0
10°	635.4	638.7	641.9	645.3	638.8
12.5°	625.6	630.1	635.4	636.0	631.1
15°	614.6	618.7	624.5	628.3	620.2
17.5°	602.3	606.3	613.8	614.5	609.5
20°	588.5	593.4	602.5	604.1	595.2
22.5°	572.9	579.5	587.1	588.6	582.1
25°	556.5	563.4	572.7	574.8	566.1
27.5°	539.4	546.0	556.5	558.0	550.6
30°	521.1	527.2	538.7	541.3	533.8
32.5°	502.4	508.6	521.3	523.5	516.2
35°	481.8	489.3	500.9	504.4	496.2
37.5°	460.7	468.0	481.1	484.3	475.5
40°	438.8	446.1	459.0	461.6	453.2
42.5°	416.5	423.8	437.6	438.0	431.0
45°	393.7	400.7	413.5	413.9	405.7
47.5°	370.5	377.6	389.1	387.8	380.1
50°	347.1	353.8	363.9	361.3	354.4
52.5°	322.9	329.4	338.9	334.7	328.2
55°	298.5	304.5	312.5	308.0	302.9
57.5°	273.9	280.0	286.1	281.5	277.1
60°	249.1	254.5	259.5	254.8	251.5
62.5°	223.9	228.5	232.8	228.4	225.2
65°	198.5	202.5	206.1	201.9	198.6
67.5°	173.1	176.5	179.8	175.6	172.1
70°	147.8	150.7	153.7	149.4	146.1
72.5°	122.8	125.4	128.1	123.8	121.0
75°	98.5	100.7	102.9	99.2	97.0
77.5°	75.3	77.2	78.7	76.3	74.2
80°	53.7	55.1	56.0	55.1	53.1
82.5°	34.5	35.5	36.0	36.0	34.7
85°	18.8	19.1	20.0	20.2	19.5
87.5°	7.3	7.7	7.9	8.6	7.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)