

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: P488689

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-2LO-27-120-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: P488689  
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-LD4-2LO-27-120-EDD  
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

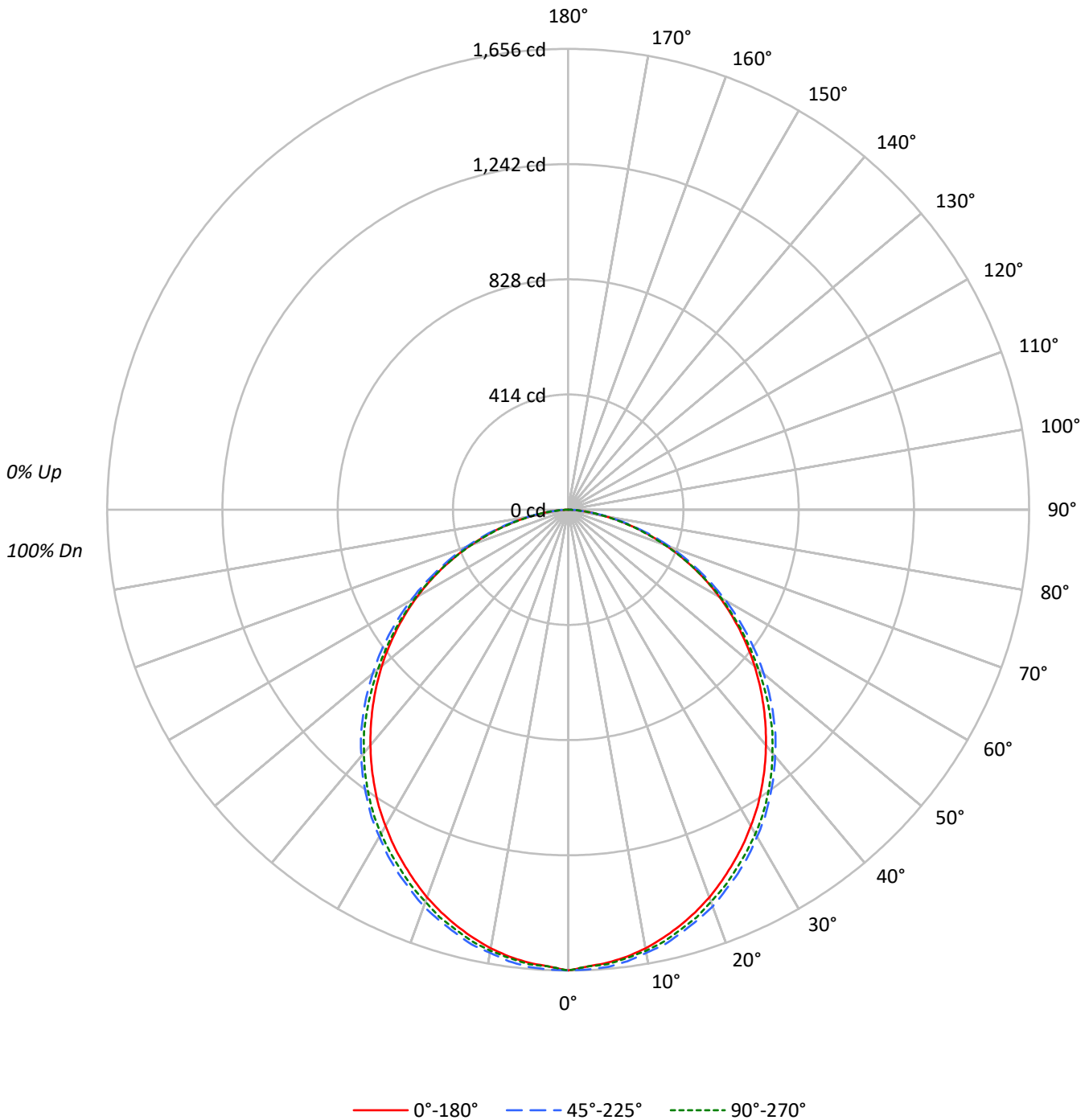
Lumens per Lamp: N/A  
Luminaire Lumens: 4352.5 lumens  
Efficiency: N/A  
Efficacy: 93.0 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
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°	4455	4455	4455
5°	4414	4455	4428
10°	4373	4418	4397
15°	4313	4383	4352
20°	4245	4346	4294
25°	4162	4283	4234
30°	4078	4217	4178
35°	3986	4144	4106
40°	3883	4062	4010
45°	3774	3964	3889
50°	3660	3837	3737
55°	3528	3693	3579
60°	3377	3518	3409
65°	3183	3305	3185
70°	2928	3046	2896
75°	2578	2695	2539
80°	2095	2187	2072
85°	1460	1556	1519



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	155.9	3.6
10°-20°	441.8	10.2
20°-30°	659.0	15.1
30°-40°	780.9	17.9
40°-50°	790.2	18.2
50°-60°	690.1	15.9
60°-70°	504.3	11.6
70°-80°	268.3	6.2
80°-90°	62.0	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°	1256.7	28.9
0°-40°	2037.6	46.8
0°-60°	3517.9	80.8
0°-90°	4352.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4352.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1656	1656	1656	1656	1656	
5°	1634	1637	1649	1653	1639	155
15°	1548	1558	1573	1583	1562	436
25°	1402	1419	1442	1448	1426	646
35°	1214	1232	1262	1270	1250	759
45°	992	1009	1042	1042	1022	765
55°	752	767	787	776	763	672
65°	500	510	519	509	500	495
75°	248	254	259	250	244	264
85°	47	48	50	51	49	60
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1655.5	1655.5	1655.5	1655.5	1655.5
2.5°	1642.6	1647.9	1653.5	1655.9	1642.4
5°	1634.0	1637.1	1649.3	1653.1	1639.1
7.5°	1619.8	1624.5	1636.4	1638.1	1624.7
10°	1600.5	1608.8	1616.7	1625.4	1609.0
12.5°	1575.8	1587.1	1600.5	1602.1	1589.6
15°	1548.1	1558.4	1573.1	1582.6	1562.0
17.5°	1517.0	1527.0	1546.0	1547.7	1535.3
20°	1482.4	1494.8	1517.5	1521.5	1499.3
22.5°	1443.0	1459.8	1478.7	1482.5	1466.1
25°	1401.8	1419.1	1442.5	1447.9	1426.0
27.5°	1358.7	1375.2	1401.6	1405.4	1387.0
30°	1312.5	1328.0	1357.0	1363.3	1344.5
32.5°	1265.5	1281.1	1313.1	1318.5	1300.2
35°	1213.5	1232.4	1261.6	1270.4	1249.8
37.5°	1160.3	1178.8	1211.9	1219.8	1197.8
40°	1105.3	1123.6	1156.2	1162.7	1141.5
42.5°	1049.1	1067.4	1102.2	1103.2	1085.6
45°	991.6	1009.2	1041.7	1042.5	1022.0
47.5°	933.3	951.1	980.1	976.8	957.5
50°	874.3	891.2	916.6	910.0	892.6
52.5°	813.3	829.7	853.6	842.9	826.6
55°	751.9	767.1	787.1	775.7	762.9
57.5°	690.0	705.3	720.7	709.1	698.1
60°	627.5	641.0	653.6	641.8	633.4
62.5°	564.0	575.6	586.5	575.2	567.3
65°	499.9	510.0	519.0	508.7	500.2
67.5°	436.0	444.7	453.0	442.3	433.5
70°	372.2	379.6	387.2	376.2	368.1
72.5°	309.3	315.8	322.6	311.9	304.8
75°	248.0	253.7	259.2	249.8	244.2
77.5°	189.6	194.4	198.2	192.2	186.8
80°	135.2	138.9	141.1	138.7	133.7
82.5°	86.9	89.5	90.7	90.6	87.3
85°	47.3	48.1	50.4	50.9	49.2
87.5°	18.3	19.5	20.0	21.6	19.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)