

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: P488649

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-1HI-50-120-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: P488649  
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-LD4-1HI-50-120-EDD  
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

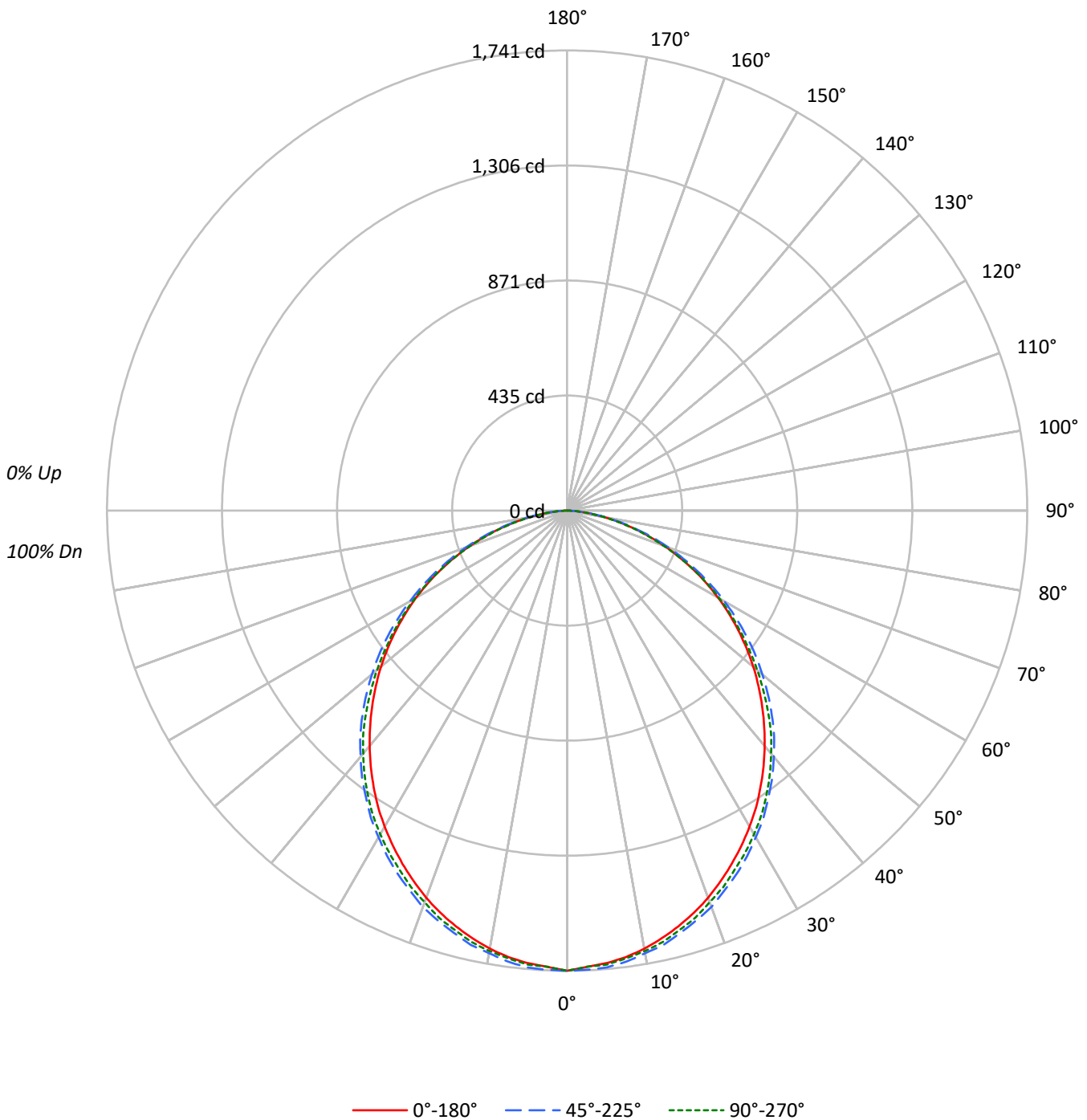
Lumens per Lamp: N/A  
Luminaire Lumens: 4577.6 lumens  
Efficiency: N/A  
Efficacy: 106.0 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 43.2  
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°	4686	4686	4686
5°	4642	4686	4657
10°	4600	4646	4624
15°	4536	4609	4577
20°	4464	4570	4515
25°	4377	4505	4453
30°	4289	4434	4394
35°	4192	4359	4318
40°	4084	4272	4217
45°	3969	4169	4090
50°	3850	4036	3930
55°	3710	3884	3765
60°	3552	3700	3585
65°	3347	3476	3350
70°	3080	3205	3046
75°	2713	2835	2671
80°	2204	2300	2179
85°	1535	1636	1596



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	164.0	3.6
10°-20°	464.7	10.2
20°-30°	693.1	15.1
30°-40°	821.3	17.9
40°-50°	831.0	18.2
50°-60°	725.8	15.9
60°-70°	530.4	11.6
70°-80°	282.2	6.2
80°-90°	65.2	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°	1321.7	28.9
0°-40°	2143.0	46.8
0°-60°	3699.8	80.8
0°-90°	4577.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4577.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1741	1741	1741	1741	1741	
5°	1718	1722	1735	1739	1724	163
15°	1628	1639	1654	1664	1643	459
25°	1474	1492	1517	1523	1500	679
35°	1276	1296	1327	1336	1314	798
45°	1043	1061	1096	1096	1075	805
55°	791	807	828	816	802	707
65°	526	536	546	535	526	520
75°	261	267	273	263	257	277
85°	50	51	53	54	52	63
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1741.2	1741.2	1741.2	1741.2	1741.2
2.5°	1727.6	1733.2	1739.0	1741.5	1727.4
5°	1718.5	1721.7	1734.6	1738.6	1723.9
7.5°	1703.6	1708.5	1721.0	1722.8	1708.7
10°	1683.3	1692.0	1700.3	1709.4	1692.2
12.5°	1657.3	1669.1	1683.3	1684.9	1671.9
15°	1628.1	1639.0	1654.4	1664.4	1642.8
17.5°	1595.5	1606.0	1626.0	1627.8	1614.7
20°	1559.0	1572.1	1596.0	1600.2	1576.8
22.5°	1517.7	1535.3	1555.2	1559.2	1542.0
25°	1474.3	1492.4	1517.1	1522.7	1499.7
27.5°	1429.0	1446.4	1474.1	1478.1	1458.7
30°	1380.3	1396.7	1427.1	1433.9	1414.1
32.5°	1331.0	1347.3	1381.1	1386.7	1367.5
35°	1276.2	1296.2	1326.8	1336.1	1314.5
37.5°	1220.3	1239.7	1274.6	1282.9	1259.7
40°	1162.5	1181.7	1216.0	1222.9	1200.6
42.5°	1103.3	1122.6	1159.2	1160.3	1141.8
45°	1042.9	1061.4	1095.5	1096.4	1074.8
47.5°	981.6	1000.3	1030.8	1027.3	1007.0
50°	919.6	937.3	964.0	957.1	938.8
52.5°	855.3	872.6	897.8	886.5	869.3
55°	790.8	806.7	827.8	815.8	802.4
57.5°	725.6	741.8	757.9	745.8	734.2
60°	660.0	674.1	687.4	675.0	666.1
62.5°	593.2	605.4	616.8	605.0	596.7
65°	525.7	536.4	545.9	535.0	526.1
67.5°	458.6	467.7	476.4	465.1	455.9
70°	391.5	399.3	407.3	395.7	387.1
72.5°	325.3	332.2	339.2	328.0	320.5
75°	260.9	266.9	272.7	262.7	256.9
77.5°	199.4	204.4	208.4	202.1	196.5
80°	142.2	146.0	148.4	145.9	140.6
82.5°	91.4	94.2	95.4	95.2	91.8
85°	49.7	50.6	53.0	53.5	51.7
87.5°	19.2	20.5	21.0	22.7	20.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)