

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: P489606

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-1STD-40-120-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: P489606  
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-LD4-1STD-40-120-EDD-90  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

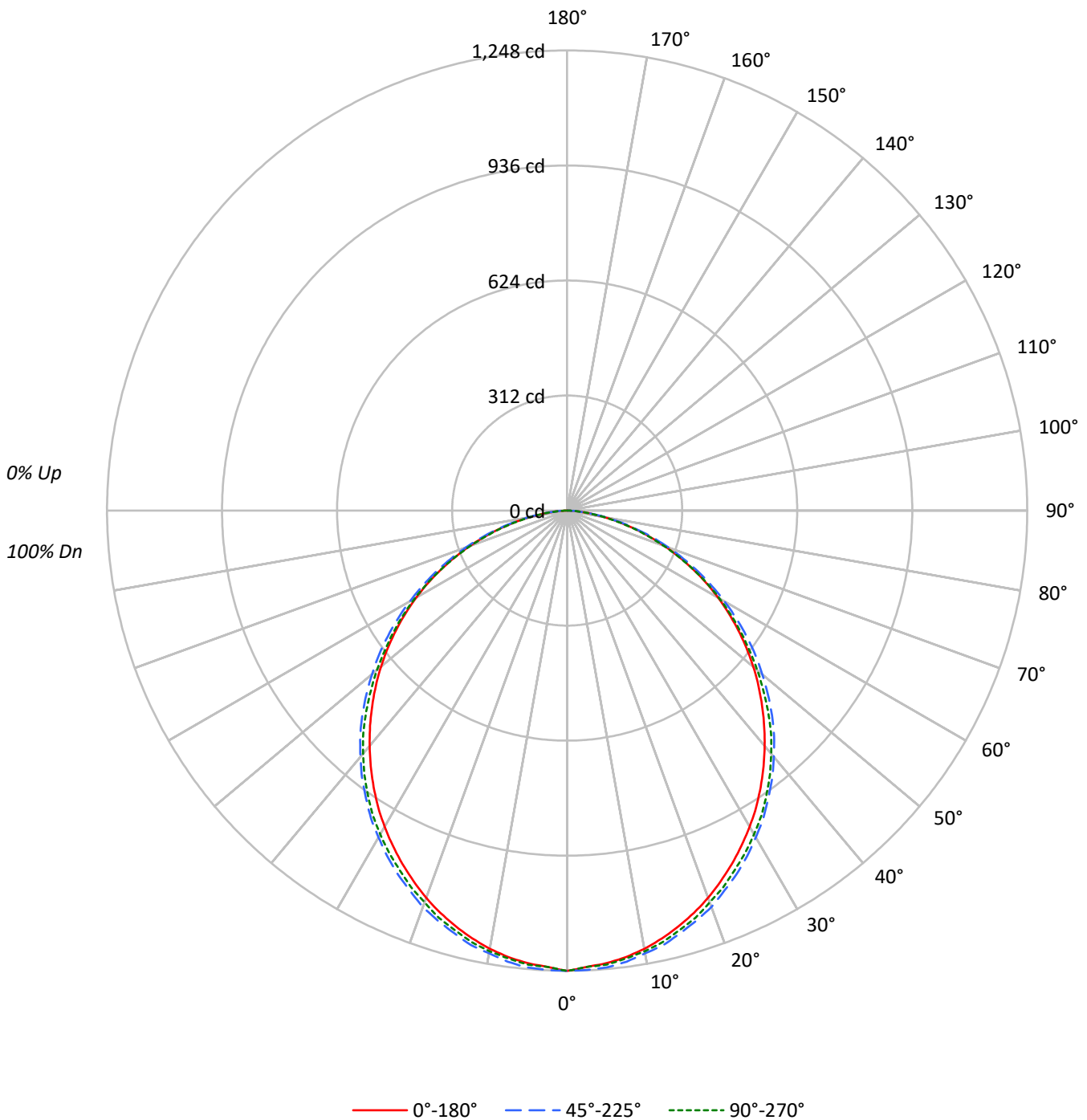
Lumens per Lamp: N/A  
Luminaire Lumens: 3282.1 lumens  
Efficiency: N/A  
Efficacy: 98.6 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
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°	1664	1680	1669
10°	1649	1666	1658
15°	1626	1652	1641
20°	1601	1638	1619
25°	1569	1615	1596
30°	1538	1590	1575
35°	1503	1563	1548
40°	1464	1531	1512
45°	1423	1495	1466
50°	1380	1447	1409
55°	1330	1392	1350
60°	1273	1326	1285
65°	1200	1246	1201
70°	1104	1149	1092
75°	972	1016	958
80°	790	824	781
85°	550	587	573



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.6	3.6
10°-20°	333.2	10.2
20°-30°	496.9	15.1
30°-40°	588.9	17.9
40°-50°	595.8	18.2
50°-60°	520.4	15.9
60°-70°	380.3	11.6
70°-80°	202.3	6.2
80°-90°	46.8	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°	947.7	28.9
0°-40°	1536.5	46.8
0°-60°	2652.7	80.8
0°-90°	3282.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3282.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1248	1248	1248	1248	1248	
5°	1232	1234	1244	1247	1236	117
15°	1167	1175	1186	1193	1178	329
25°	1057	1070	1088	1092	1075	487
35°	915	929	951	958	942	572
45°	748	761	786	786	771	577
55°	567	578	594	585	575	507
65°	377	385	391	384	377	373
75°	187	191	196	188	184	199
85°	36	36	38	38	37	45
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1248.4	1248.4	1248.4	1248.4	1248.4
2.5°	1238.6	1242.7	1246.8	1248.7	1238.5
5°	1232.1	1234.5	1243.7	1246.6	1236.0
7.5°	1221.5	1225.0	1234.0	1235.3	1225.1
10°	1206.9	1213.1	1219.1	1225.6	1213.3
12.5°	1188.3	1196.8	1206.9	1208.1	1198.7
15°	1167.4	1175.2	1186.2	1193.4	1177.9
17.5°	1143.9	1151.5	1165.8	1167.1	1157.7
20°	1117.8	1127.2	1144.3	1147.3	1130.6
22.5°	1088.2	1100.8	1115.1	1117.9	1105.6
25°	1057.1	1070.1	1087.8	1091.8	1075.3
27.5°	1024.5	1037.0	1056.9	1059.8	1045.9
30°	989.7	1001.4	1023.2	1028.1	1013.9
32.5°	954.3	966.0	990.2	994.2	980.5
35°	915.0	929.3	951.3	958.0	942.5
37.5°	875.0	888.9	913.9	919.8	903.2
40°	833.5	847.3	871.8	876.8	860.8
42.5°	791.1	804.9	831.1	831.9	818.6
45°	747.8	761.0	785.5	786.1	770.7
47.5°	703.8	717.2	739.0	736.6	722.0
50°	659.3	672.1	691.2	686.2	673.1
52.5°	613.3	625.6	643.7	635.6	623.3
55°	567.0	578.4	593.5	584.9	575.3
57.5°	520.3	531.8	543.4	534.7	526.4
60°	473.2	483.3	492.8	484.0	477.6
62.5°	425.3	434.0	442.2	433.8	427.8
65°	376.9	384.6	391.4	383.6	377.2
67.5°	328.8	335.3	341.6	333.5	326.9
70°	280.7	286.3	292.0	283.7	277.6
72.5°	233.2	238.2	243.2	235.2	229.8
75°	187.0	191.3	195.5	188.3	184.2
77.5°	142.9	146.6	149.4	144.9	140.9
80°	102.0	104.7	106.4	104.6	100.8
82.5°	65.6	67.5	68.4	68.3	65.8
85°	35.6	36.3	38.0	38.4	37.1
87.5°	13.8	14.7	15.1	16.3	15.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)