

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: P489105

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-2STD-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: P489105  
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-LD4-2STD-50-120-EDD  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

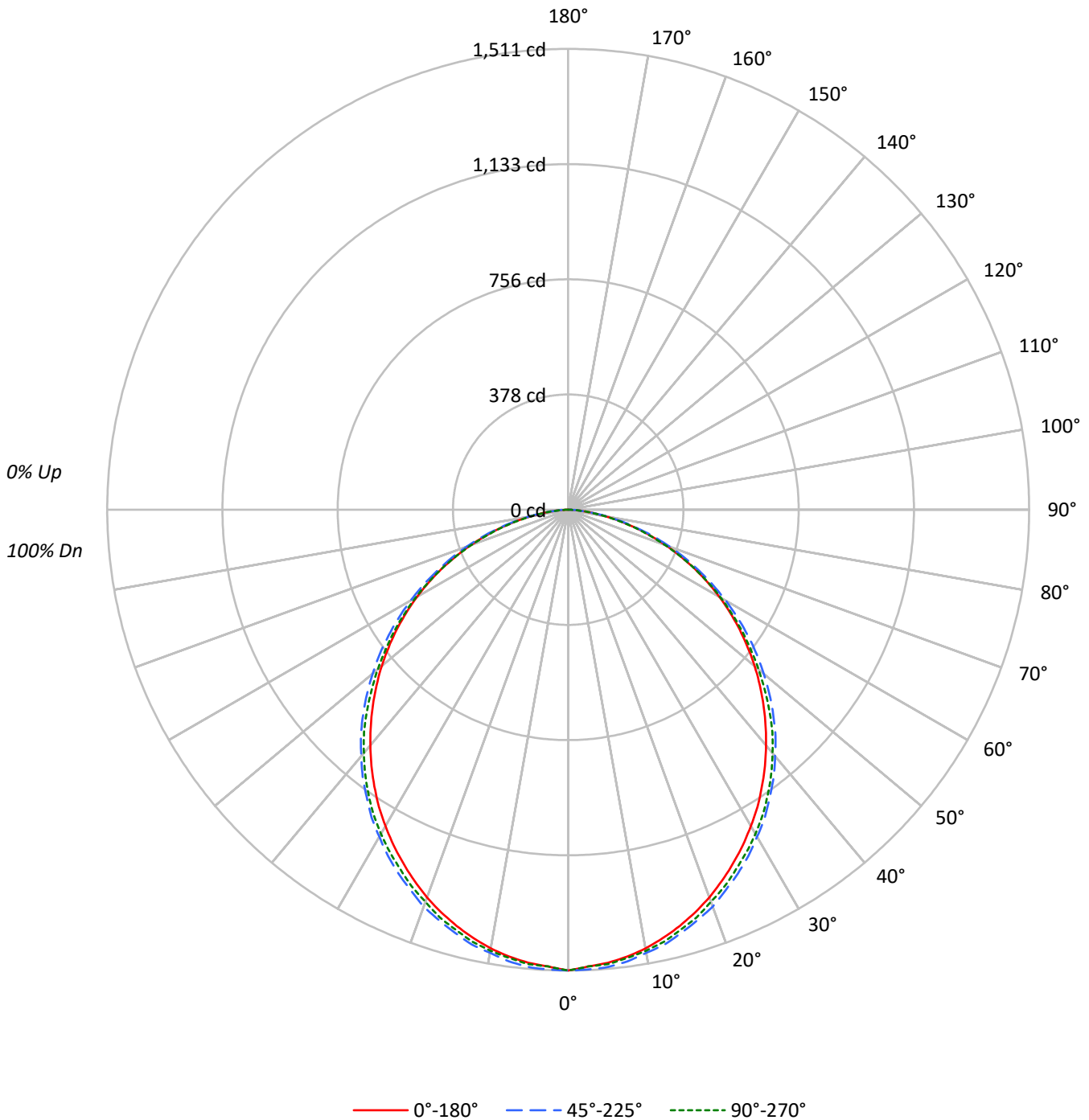
Lumens per Lamp: N/A  
Luminaire Lumens: 3972.3 lumens  
Efficiency: N/A  
Efficacy: 119.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	4066	4066	4066
5°	4028	4066	4041
10°	3991	4032	4012
15°	3936	4000	3972
20°	3874	3966	3918
25°	3799	3909	3864
30°	3722	3848	3813
35°	3638	3782	3747
40°	3544	3707	3660
45°	3444	3618	3550
50°	3341	3502	3411
55°	3219	3370	3267
60°	3082	3210	3111
65°	2905	3016	2907
70°	2673	2781	2643
75°	2354	2460	2318
80°	1912	1996	1891
85°	1331	1420	1386



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	142.3	3.6
10°-20°	403.2	10.2
20°-30°	601.4	15.1
30°-40°	712.7	17.9
40°-50°	721.1	18.2
50°-60°	629.8	15.9
60°-70°	460.2	11.6
70°-80°	244.9	6.2
80°-90°	56.6	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°	1147.0	28.9
0°-40°	1859.7	46.8
0°-60°	3210.6	80.8
0°-90°	3972.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3972.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1511	1511	1511	1511	1511	
5°	1491	1494	1505	1509	1496	141
15°	1413	1422	1436	1444	1426	398
25°	1279	1295	1316	1321	1301	589
35°	1108	1125	1151	1159	1141	693
45°	905	921	951	951	933	698
55°	686	700	718	708	696	613
65°	456	466	474	464	456	451
75°	226	232	237	228	223	241
85°	43	44	46	46	45	55
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1510.9	1510.9	1510.9	1510.9	1510.9
2.5°	1499.1	1504.0	1509.0	1511.2	1499.0
5°	1491.2	1494.1	1505.3	1508.7	1496.0
7.5°	1478.3	1482.6	1493.4	1495.0	1482.7
10°	1460.7	1468.3	1475.5	1483.4	1468.4
12.5°	1438.2	1448.4	1460.7	1462.1	1450.8
15°	1412.8	1422.3	1435.7	1444.3	1425.6
17.5°	1384.5	1393.6	1411.0	1412.5	1401.2
20°	1352.9	1364.2	1385.0	1388.6	1368.3
22.5°	1317.0	1332.2	1349.6	1353.0	1338.1
25°	1279.4	1295.1	1316.5	1321.4	1301.4
27.5°	1240.0	1255.1	1279.2	1282.7	1265.8
30°	1197.8	1212.0	1238.4	1244.3	1227.1
32.5°	1155.0	1169.2	1198.4	1203.3	1186.6
35°	1107.5	1124.8	1151.4	1159.4	1140.7
37.5°	1059.0	1075.8	1106.0	1113.3	1093.1
40°	1008.8	1025.4	1055.2	1061.2	1041.8
42.5°	957.4	974.1	1005.9	1006.9	990.8
45°	905.0	921.1	950.7	951.4	932.7
47.5°	851.8	868.0	894.5	891.5	873.8
50°	798.0	813.4	836.5	830.6	814.7
52.5°	742.2	757.2	779.1	769.3	754.4
55°	686.2	700.0	718.3	707.9	696.3
57.5°	629.7	643.7	657.7	647.2	637.1
60°	572.7	585.0	596.5	585.8	578.0
62.5°	514.8	525.3	535.2	525.0	517.8
65°	456.2	465.5	473.7	464.2	456.5
67.5°	398.0	405.8	413.4	403.6	395.6
70°	339.7	346.5	353.4	343.3	335.9
72.5°	282.3	288.2	294.4	284.6	278.2
75°	226.4	231.6	236.6	227.9	222.9
77.5°	173.0	177.4	180.9	175.4	170.5
80°	123.4	126.7	128.8	126.6	122.0
82.5°	79.3	81.7	82.8	82.6	79.7
85°	43.1	43.9	46.0	46.4	44.9
87.5°	16.7	17.8	18.3	19.7	18.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)