

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: P489132

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-3STD-27-120-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: P489132  
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-LD4-3STD-27-120-EDD-90  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

**Summary**

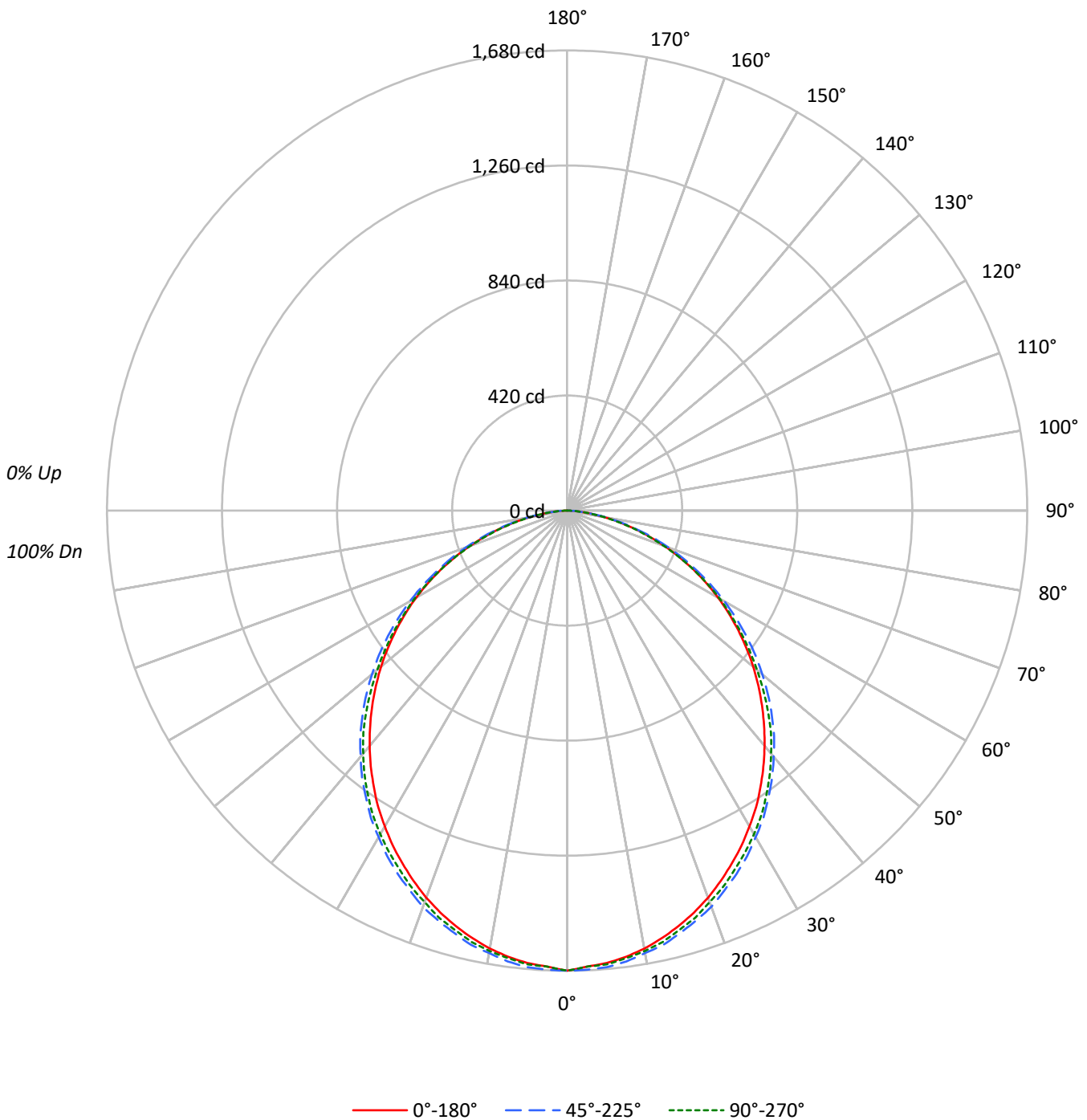
Lumens per Lamp: N/A  
Luminaire Lumens: 4416.0 lumens  
Efficiency: N/A  
Efficacy: 88.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 50  
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

TEST NUMBER: P489132

CATALOG NUMBER: CLM-24-2-INS-A19156-LD4-3STD-27-120-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P489132

CATALOG NUMBER: CLM-24-2-INS-A19156-LD4-3STD-27-120-EDD-90

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°	4520	4520	4520
5°	4478	4520	4492
10°	4437	4482	4461
15°	4376	4446	4415
20°	4307	4409	4356
25°	4223	4345	4295
30°	4138	4278	4239
35°	4044	4205	4166
40°	3939	4121	4069
45°	3829	4022	3946
50°	3714	3893	3791
55°	3579	3746	3631
60°	3427	3569	3458
65°	3230	3353	3231
70°	2972	3091	2939
75°	2617	2734	2576
80°	2126	2219	2101
85°	1482	1578	1541



TEST NUMBER: P489132  
 CATALOG NUMBER: CLM-24-2-INS-A19156-LD4-3STD-27-120-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	158.2	3.6
10°-20°	448.3	10.2
20°-30°	668.6	15.1
30°-40°	792.3	17.9
40°-50°	801.7	18.2
50°-60°	700.1	15.9
60°-70°	511.7	11.6
70°-80°	272.2	6.2
80°-90°	62.9	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°	1275.1	28.9
0°-40°	2067.3	46.8
0°-60°	3569.1	80.8
0°-90°	4416.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4416.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1680	1680	1680	1680	1680	
5°	1658	1661	1673	1677	1663	157
15°	1571	1581	1596	1606	1585	443
25°	1422	1440	1464	1469	1447	655
35°	1231	1250	1280	1289	1268	770
45°	1006	1024	1057	1058	1037	776
55°	763	778	798	787	774	682
65°	507	518	527	516	508	502
75°	252	257	263	253	248	268
85°	48	49	51	52	50	61
90°	0	0	0	0	0	



TEST NUMBER: P489132  
CATALOG NUMBER: CLM-24-2-INS-A19156-LD4-3STD-27-120-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1679.7	1679.7	1679.7	<i>1679.7</i>	1679.7
2.5°	<i>1666.5</i>	<i>1672.0</i>	<i>1677.6</i>	<i>1680.0</i>	<i>1666.4</i>
5°	1657.8	1660.9	1673.4	<i>1677.2</i>	1663.0
7.5°	1643.4	1648.2	1660.2	<i>1662.0</i>	1648.3
10°	1623.8	1632.2	1640.3	<i>1649.0</i>	1632.4
12.5°	1598.8	1610.2	1623.8	<i>1625.4</i>	1612.8
15°	1570.6	1581.1	1596.0	<i>1605.6</i>	1584.8
17.5°	1539.1	1549.3	1568.5	<i>1570.3</i>	1557.7
20°	1504.0	1516.6	1539.7	<i>1543.7</i>	1521.1
22.5°	1464.1	1481.0	1500.3	<i>1504.1</i>	1487.5
25°	1422.2	1439.7	1463.5	<i>1469.0</i>	1446.7
27.5°	1378.5	1395.3	1422.1	<i>1425.9</i>	1407.2
30°	1331.6	1347.3	1376.7	<i>1383.2</i>	1364.1
32.5°	1284.0	1299.7	1332.3	<i>1337.7</i>	1319.2
35°	1231.1	1250.4	1280.0	<i>1288.9</i>	1268.1
37.5°	1177.2	1196.0	1229.6	<i>1237.6</i>	1215.2
40°	1121.4	1140.0	1173.0	<i>1179.7</i>	1158.2
42.5°	1064.4	1082.9	1118.3	<i>1119.3</i>	1101.5
45°	1006.1	1023.9	1056.8	<i>1057.7</i>	1036.9
47.5°	946.9	965.0	994.4	<i>991.0</i>	971.4
50°	887.1	904.2	930.0	<i>923.3</i>	905.6
52.5°	825.1	841.8	866.1	<i>855.2</i>	838.6
55°	762.8	778.2	798.5	<i>787.0</i>	774.0
57.5°	700.0	715.6	731.2	<i>719.4</i>	708.2
60°	636.7	650.3	663.1	<i>651.2</i>	642.6
62.5°	572.3	584.0	595.0	<i>583.6</i>	575.6
65°	507.2	517.5	526.6	<i>516.1</i>	507.5
67.5°	442.4	451.2	459.6	<i>448.7</i>	439.8
70°	377.7	385.2	392.9	<i>381.7</i>	373.5
72.5°	313.8	320.4	327.3	<i>316.4</i>	309.2
75°	251.7	257.4	263.0	<i>253.4</i>	247.8
77.5°	192.3	197.2	201.1	<i>195.0</i>	189.5
80°	137.2	140.9	143.2	<i>140.7</i>	135.6
82.5°	88.2	90.8	92.1	<i>91.9</i>	88.6
85°	48.0	48.8	51.1	<i>51.6</i>	49.9
87.5°	18.6	19.8	20.3	<i>21.9</i>	20.1
90°	0.0	0.0	0.0	<i>0.0</i>	0.0

(END OF REPORT)