

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: P489190

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-5LO-20-120-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: P489190  
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-LD4-5LO-20-120-EDD-90  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

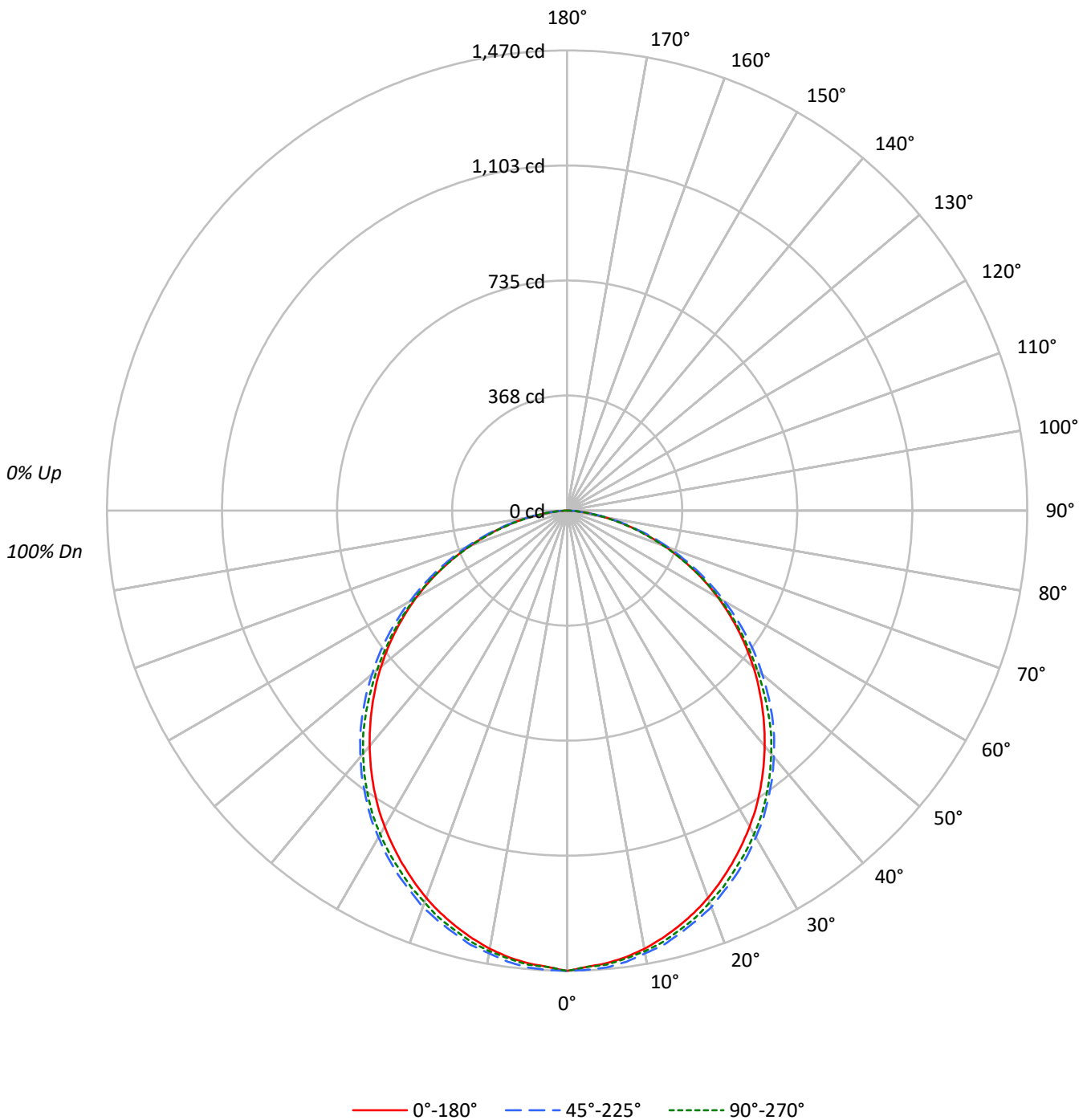
Lumens per Lamp: N/A  
Luminaire Lumens: 3865.7 lumens  
Efficiency: N/A  
Efficacy: 66.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 58.5  
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: P489190

CATALOG NUMBER: CLM-24-2-INS-A19156-LD4-5LO-20-120-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P489190

CATALOG NUMBER: CLM-24-2-INS-A19156-LD4-5LO-20-120-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°	3957	3957	3957
5°	3920	3957	3932
10°	3884	3924	3905
15°	3830	3892	3865
20°	3770	3860	3813
25°	3697	3804	3760
30°	3622	3745	3711
35°	3540	3681	3647
40°	3449	3607	3562
45°	3352	3521	3454
50°	3251	3408	3319
55°	3133	3279	3179
60°	2999	3124	3027
65°	2827	2935	2829
70°	2601	2706	2572
75°	2290	2394	2255
80°	1861	1942	1839
85°	1297	1380	1349



TEST NUMBER: P489190

CATALOG NUMBER: CLM-24-2-INS-A19156-LD4-5LO-20-120-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	138.5	3.6
10°-20°	392.4	10.2
20°-30°	585.3	15.1
30°-40°	693.6	17.9
40°-50°	701.8	18.2
50°-60°	612.9	15.9
60°-70°	447.9	11.6
70°-80°	238.3	6.2
80°-90°	55.1	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°	1116.2	28.9
0°-40°	1809.7	46.8
0°-60°	3124.4	80.8
0°-90°	3865.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3865.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1470	1470	1470	1470	1470	
5°	1451	1454	1465	1468	1456	138
15°	1375	1384	1397	1406	1387	388
25°	1245	1260	1281	1286	1266	574
35°	1078	1095	1120	1128	1110	674
45°	881	896	925	926	908	679
55°	668	681	699	689	678	597
65°	444	453	461	452	444	439
75°	220	225	230	222	217	234
85°	42	43	45	45	44	53
90°	0	0	0	0	0	



TEST NUMBER: P489190

CATALOG NUMBER: CLM-24-2-INS-A19156-LD4-5LO-20-120-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1470.4	1470.4	1470.4	1470.4	1470.4
2.5°	1458.9	1463.6	1468.5	1470.7	1458.7
5°	1451.2	1454.0	1464.9	1468.2	1455.8
7.5°	1438.7	1442.8	1453.4	1454.9	1443.0
10°	1421.5	1428.9	1435.9	1443.6	1429.0
12.5°	1399.6	1409.6	1421.5	1422.9	1411.9
15°	1374.9	1384.1	1397.1	1405.6	1387.3
17.5°	1347.4	1356.2	1373.1	1374.6	1363.6
20°	1316.6	1327.6	1347.8	1351.3	1331.6
22.5°	1281.6	1296.5	1313.3	1316.7	1302.2
25°	1245.0	1260.3	1281.2	1285.9	1266.5
27.5°	1206.7	1221.4	1244.9	1248.2	1231.8
30°	1165.7	1179.5	1205.2	1210.9	1194.2
32.5°	1124.0	1137.8	1166.3	1171.0	1154.8
35°	1077.7	1094.6	1120.5	1128.3	1110.1
37.5°	1030.5	1046.9	1076.4	1083.4	1063.8
40°	981.7	997.9	1026.9	1032.7	1013.9
42.5°	931.7	948.0	978.9	979.8	964.2
45°	880.7	896.3	925.2	925.9	907.7
47.5°	828.9	844.7	870.5	867.5	850.4
50°	776.6	791.6	814.1	808.3	792.8
52.5°	722.3	736.9	758.2	748.7	734.1
55°	667.8	681.3	699.0	688.9	677.6
57.5°	612.8	626.4	640.1	629.8	620.0
60°	557.3	569.3	580.5	570.0	562.5
62.5°	501.0	511.2	520.9	510.9	503.9
65°	444.0	453.0	461.0	451.8	444.3
67.5°	387.3	394.9	402.3	392.8	385.0
70°	330.6	337.2	343.9	334.1	326.9
72.5°	274.7	280.5	286.5	277.0	270.7
75°	220.3	225.4	230.3	221.8	216.9
77.5°	168.4	172.7	176.0	170.7	165.9
80°	120.1	123.3	125.3	123.2	118.7
82.5°	77.2	79.5	80.6	80.4	77.5
85°	42.0	42.7	44.7	45.2	43.7
87.5°	16.2	17.3	17.8	19.1	17.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)