

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: P489072

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-2HI-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: P489072  
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-LD4-2HI-27-120-EDD-90  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

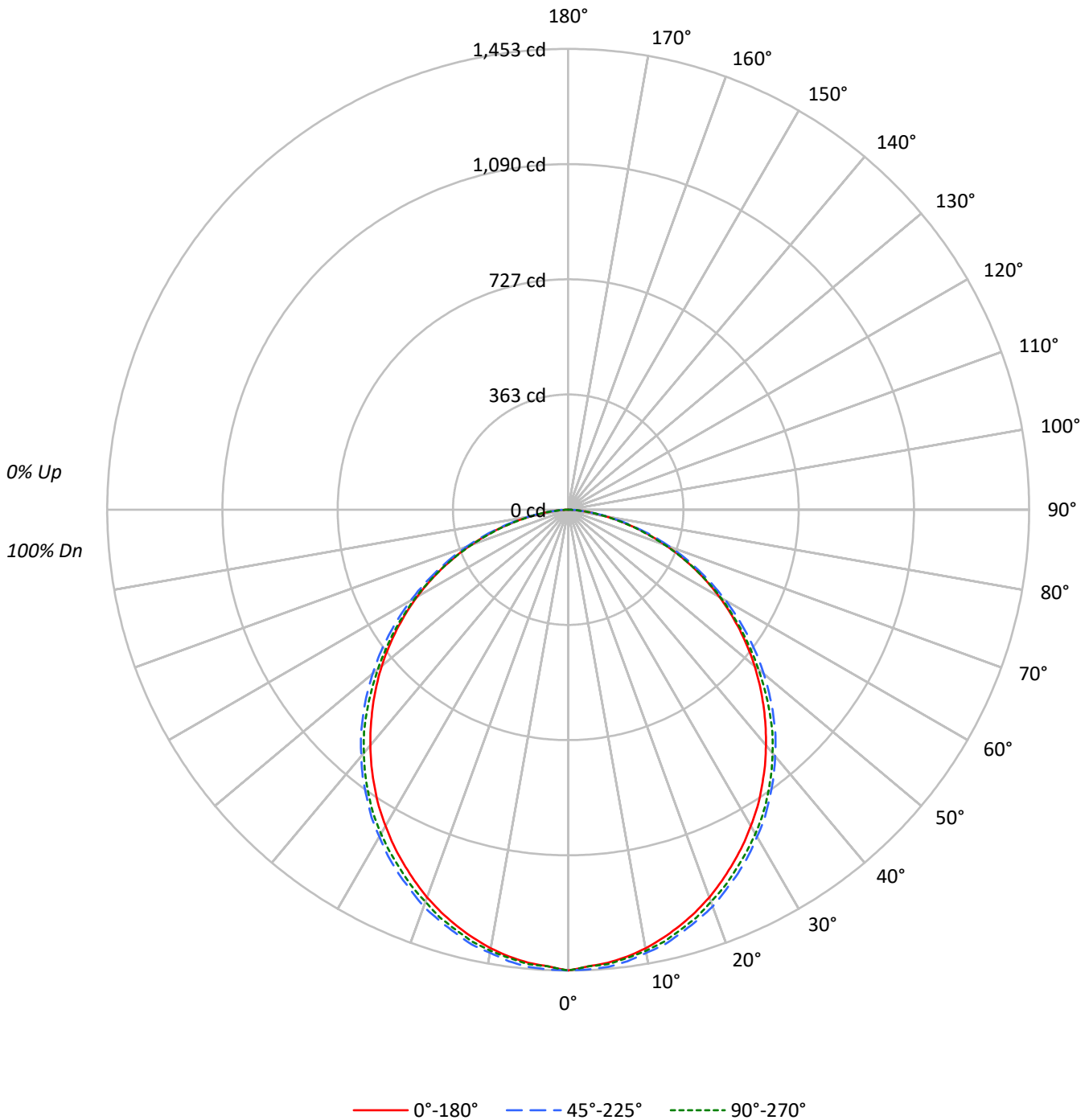
Lumens per Lamp: N/A  
Luminaire Lumens: 3819.2 lumens  
Efficiency: N/A  
Efficacy: 88.4 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	3909	3909	3909
5°	3873	3909	3885
10°	3838	3876	3858
15°	3784	3845	3819
20°	3725	3813	3767
25°	3652	3758	3715
30°	3578	3700	3666
35°	3498	3637	3603
40°	3407	3564	3519
45°	3311	3478	3413
50°	3212	3367	3279
55°	3095	3240	3141
60°	2963	3087	2991
65°	2793	2900	2795
70°	2570	2674	2541
75°	2262	2365	2228
80°	1839	1918	1818
85°	1281	1365	1331



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	136.8	3.6
10°-20°	387.7	10.2
20°-30°	578.2	15.1
30°-40°	685.2	17.9
40°-50°	693.3	18.2
50°-60°	605.5	15.9
60°-70°	442.5	11.6
70°-80°	235.4	6.2
80°-90°	54.4	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°	1102.8	28.9
0°-40°	1788.0	46.8
0°-60°	3086.8	80.8
0°-90°	3819.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3819.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1453	1453	1453	1453	1453	
5°	1434	1436	1447	1451	1438	136
15°	1358	1368	1380	1389	1371	383
25°	1230	1245	1266	1270	1251	567
35°	1065	1081	1107	1115	1097	666
45°	870	886	914	915	897	671
55°	660	673	691	681	669	590
65°	439	448	455	446	439	434
75°	218	223	228	219	214	231
85°	42	42	44	45	43	53
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1452.7	1452.7	1452.7	1452.7	1452.7
2.5°	1441.3	1446.0	1450.9	1453.0	1441.2
5°	1433.8	1436.5	1447.2	1450.6	1438.3
7.5°	1421.4	1425.4	1435.9	1437.4	1425.6
10°	1404.4	1411.7	1418.6	1426.2	1411.8
12.5°	1382.8	1392.6	1404.4	1405.8	1394.9
15°	1358.4	1367.5	1380.3	1388.7	1370.7
17.5°	1331.2	1339.9	1356.6	1358.1	1347.2
20°	1300.7	1311.6	1331.6	1335.1	1315.6
22.5°	1266.2	1280.9	1297.6	1300.9	1286.5
25°	1230.0	1245.2	1265.8	1270.5	1251.2
27.5°	1192.2	1206.7	1229.9	1233.2	1217.0
30°	1151.6	1165.3	1190.7	1196.3	1179.8
32.5°	1110.5	1124.1	1152.3	1156.9	1140.9
35°	1064.8	1081.4	1107.0	1114.7	1096.7
37.5°	1018.2	1034.3	1063.4	1070.4	1051.0
40°	969.9	985.9	1014.5	1020.3	1001.7
42.5°	920.5	936.6	967.1	968.1	952.6
45°	870.1	885.6	914.0	914.8	896.8
47.5°	819.0	834.6	860.0	857.1	840.2
50°	767.2	782.0	804.3	798.5	783.3
52.5°	713.6	728.0	749.0	739.7	725.3
55°	659.7	673.1	690.6	680.6	669.4
57.5°	605.4	618.9	632.4	622.2	612.5
60°	550.6	562.4	573.5	563.2	555.8
62.5°	494.9	505.1	514.6	504.8	497.8
65°	438.6	447.6	455.4	446.3	438.9
67.5°	382.6	390.2	397.5	388.1	380.4
70°	326.6	333.1	339.8	330.1	323.0
72.5°	271.4	277.1	283.0	273.6	267.4
75°	217.6	222.6	227.5	219.2	214.3
77.5°	166.3	170.6	173.9	168.6	163.9
80°	118.7	121.8	123.8	121.7	117.3
82.5°	76.3	78.6	79.6	79.5	76.6
85°	41.5	42.2	44.2	44.6	43.1
87.5°	16.0	17.1	17.6	18.9	17.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)