

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: P489131

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-3STD-20-120-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: P489131  
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-20-120-EDD  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

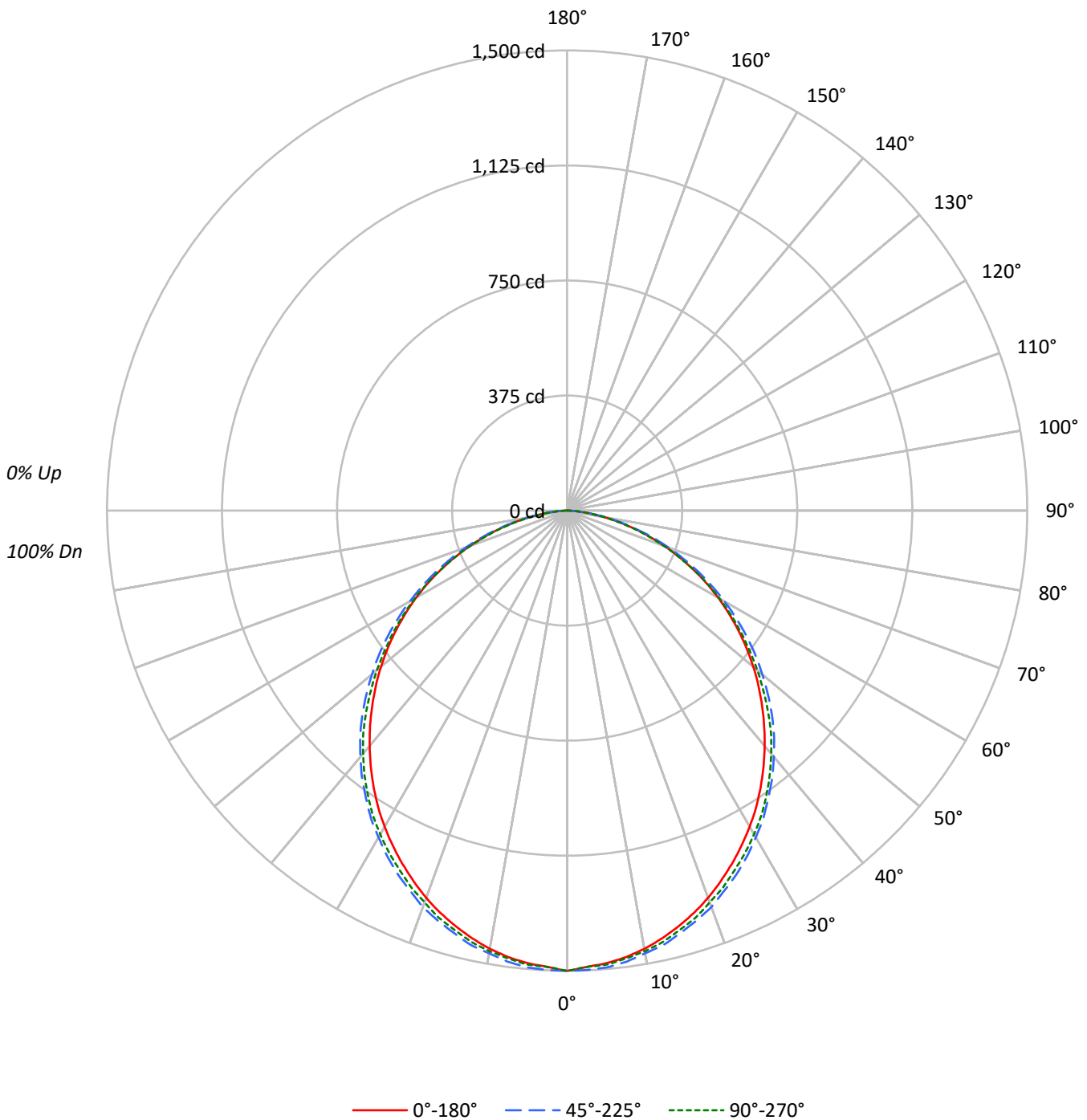
Lumens per Lamp: N/A  
Luminaire Lumens: 3944.7 lumens  
Efficiency: N/A  
Efficacy: 78.9 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

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

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CATALOG NUMBER: CLM-24-2-INS-A19156-LD4-3STD-20-120-EDD

### 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	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°	4038	4038	4038
5°	4000	4038	4013
10°	3964	4004	3985
15°	3909	3972	3944
20°	3847	3939	3891
25°	3772	3882	3837
30°	3696	3821	3787
35°	3613	3756	3721
40°	3519	3681	3634
45°	3420	3593	3525
50°	3317	3478	3387
55°	3197	3347	3244
60°	3061	3188	3089
65°	2884	2995	2886
70°	2655	2762	2625
75°	2337	2443	2302
80°	1900	1982	1878
85°	1321	1408	1377



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	141.3	3.6
10°-20°	400.4	10.2
20°-30°	597.2	15.1
30°-40°	707.7	17.9
40°-50°	716.1	18.2
50°-60°	625.4	15.9
60°-70°	457.0	11.6
70°-80°	243.2	6.2
80°-90°	56.2	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°	1139.0	28.9
0°-40°	1846.7	46.8
0°-60°	3188.3	80.8
0°-90°	3944.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3944.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1500	1500	1500	1500	1500	
5°	1481	1484	1495	1498	1486	140
15°	1403	1412	1426	1434	1416	396
25°	1270	1286	1307	1312	1292	585
35°	1100	1117	1143	1151	1133	688
45°	899	915	944	945	926	693
55°	681	695	713	703	691	609
65°	453	462	470	461	453	448
75°	225	230	235	226	221	239
85°	43	44	46	46	45	54
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1500.4	1500.4	1500.4	1500.4	1500.4
2.5°	1488.7	1493.5	1498.5	1500.7	1488.5
5°	1480.9	1483.7	1494.8	1498.2	1485.6
7.5°	1468.1	1472.3	1483.1	1484.6	1472.4
10°	1450.6	1458.1	1465.2	1473.1	1458.2
12.5°	1428.2	1438.4	1450.6	1452.0	1440.7
15°	1403.0	1412.4	1425.7	1434.3	1415.7
17.5°	1374.9	1384.0	1401.2	1402.7	1391.5
20°	1343.5	1354.7	1375.4	1379.0	1358.8
22.5°	1307.8	1323.0	1340.2	1343.6	1328.8
25°	1270.5	1286.1	1307.4	1312.2	1292.4
27.5°	1231.4	1246.4	1270.3	1273.7	1257.0
30°	1189.5	1203.6	1229.8	1235.6	1218.6
32.5°	1147.0	1161.0	1190.1	1195.0	1178.4
35°	1099.8	1117.0	1143.4	1151.3	1132.7
37.5°	1051.6	1068.3	1098.4	1105.5	1085.5
40°	1001.7	1018.3	1047.9	1053.8	1034.6
42.5°	950.8	967.3	998.9	999.9	983.9
45°	898.7	914.7	944.1	944.8	926.2
47.5°	845.9	862.0	888.2	885.3	867.8
50°	792.4	807.7	830.7	824.8	809.0
52.5°	737.1	751.9	773.7	764.0	749.1
55°	681.4	695.2	713.3	703.0	691.4
57.5°	625.3	639.2	653.1	642.7	632.7
60°	568.7	580.9	592.3	581.7	574.0
62.5°	511.2	521.7	531.5	521.3	514.2
65°	453.0	462.3	470.4	461.0	453.3
67.5°	395.2	403.0	410.5	400.8	392.8
70°	337.4	344.1	351.0	340.9	333.6
72.5°	280.3	286.2	292.3	282.6	276.2
75°	224.8	230.0	235.0	226.4	221.4
77.5°	171.8	176.2	179.6	174.1	169.3
80°	122.6	125.8	127.9	125.7	121.2
82.5°	78.8	81.1	82.2	82.1	79.1
85°	42.8	43.6	45.6	46.1	44.6
87.5°	16.6	17.7	18.1	19.5	18.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)