

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: P489600

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-1STD-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: P489600  
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-24-4-INS-A19156-LD4-1STD-27-120-EDD-90  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

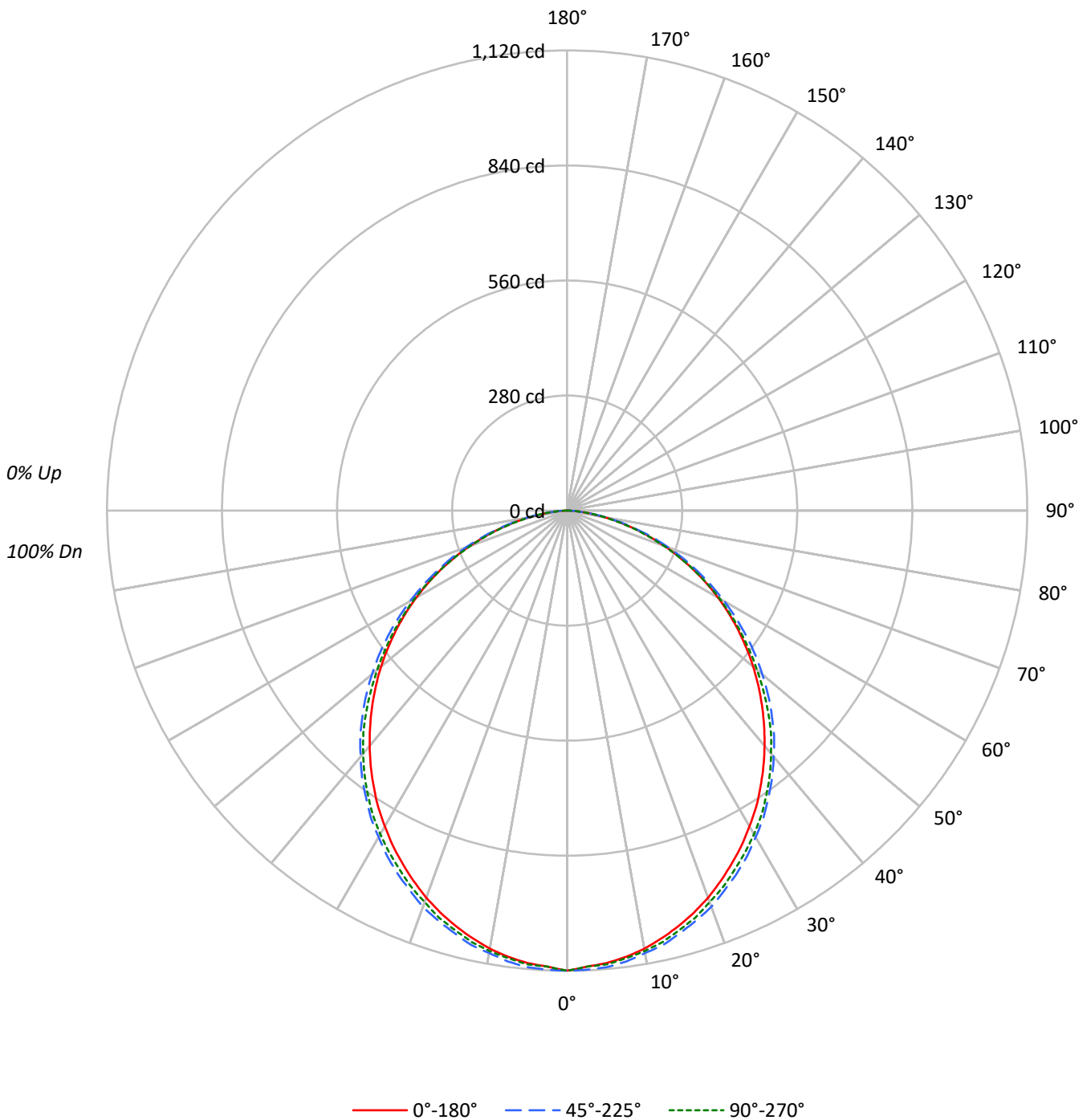
Lumens per Lamp: N/A  
Luminaire Lumens: 2944.0 lumens  
Efficiency: N/A  
Efficacy: 88.4 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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°	1507	1507	1507
5°	1493	1507	1497
10°	1479	1494	1487
15°	1459	1482	1472
20°	1436	1470	1452
25°	1408	1449	1432
30°	1379	1426	1413
35°	1348	1402	1389
40°	1313	1374	1356
45°	1276	1341	1315
50°	1238	1298	1264
55°	1193	1249	1210
60°	1142	1190	1153
65°	1076	1118	1077
70°	991	1030	980
75°	872	912	859
80°	709	739	700
85°	494	526	514



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	105.5	3.6
10°-20°	298.9	10.2
20°-30°	445.7	15.1
30°-40°	528.2	17.9
40°-50°	534.4	18.2
50°-60°	466.8	15.9
60°-70°	341.1	11.6
70°-80°	181.5	6.2
80°-90°	42.0	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°	850.1	28.9
0°-40°	1378.2	46.8
0°-60°	2379.5	80.8
0°-90°	2944.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2944.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1120	1120	1120	1120	1120	
5°	1105	1107	1116	1118	1109	105
15°	1047	1054	1064	1070	1057	295
25°	948	960	976	979	964	437
35°	821	834	853	859	845	513
45°	671	683	705	705	691	517
55°	509	519	532	525	516	455
65°	338	345	351	344	338	335
75°	168	172	175	169	165	178
85°	32	33	34	34	33	41
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1119.8	1119.8	1119.8	1119.8	1119.8
2.5°	1111.0	1114.7	1118.4	1120.0	1110.9
5°	1105.2	1107.3	1115.6	1118.2	1108.7
7.5°	1095.6	1098.8	1106.8	1108.0	1098.9
10°	1082.6	1088.2	1093.5	1099.4	1088.3
12.5°	1065.9	1073.5	1082.6	1083.6	1075.2
15°	1047.1	1054.1	1064.0	1070.4	1056.6
17.5°	1026.1	1032.9	1045.7	1046.9	1038.5
20°	1002.7	1011.1	1026.5	1029.1	1014.1
22.5°	976.1	987.4	1000.2	1002.8	991.7
25°	948.2	959.8	975.7	979.3	964.5
27.5°	919.0	930.2	948.1	950.6	938.1
30°	887.7	898.2	917.8	922.2	909.4
32.5°	856.0	866.5	888.2	891.8	879.5
35°	820.8	833.6	853.3	859.3	845.4
37.5°	784.8	797.3	819.7	825.1	810.2
40°	747.6	760.0	782.0	786.5	772.1
42.5°	709.6	722.0	745.5	746.2	734.3
45°	670.7	682.6	704.6	705.1	691.3
47.5°	631.3	643.3	662.9	660.7	647.6
50°	591.4	602.8	620.0	615.5	603.8
52.5°	550.1	561.2	577.4	570.2	559.1
55°	508.6	518.8	532.4	524.7	516.0
57.5°	466.7	477.1	487.4	479.6	472.2
60°	424.4	433.5	442.1	434.1	428.4
62.5°	381.5	389.3	396.7	389.1	383.7
65°	338.1	345.0	351.1	344.1	338.3
67.5°	294.9	300.8	306.4	299.1	293.2
70°	251.8	256.8	261.9	254.5	249.0
72.5°	209.2	213.6	218.2	210.9	206.2
75°	167.8	171.6	175.4	168.9	165.2
77.5°	128.2	131.5	134.1	130.0	126.4
80°	91.5	93.9	95.4	93.8	90.4
82.5°	58.8	60.6	61.4	61.3	59.0
85°	32.0	32.6	34.1	34.4	33.3
87.5°	12.4	13.2	13.5	14.6	13.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)