

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: P488643

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-1HI-30-120-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: P488643  
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-12-4-INS-A19156-LD4-1HI-30-120-EDD  
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

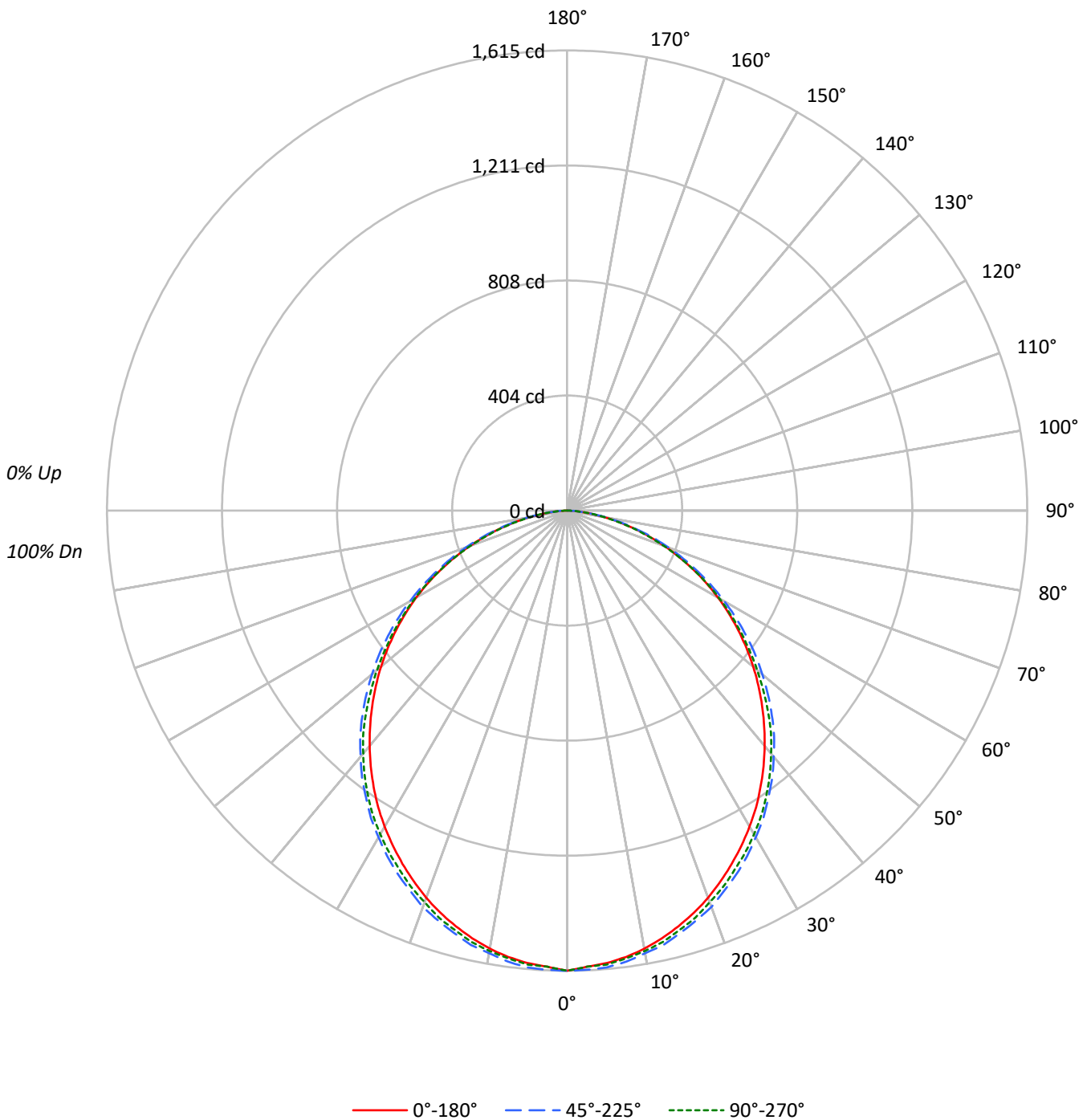
Lumens per Lamp: N/A  
Luminaire Lumens: 4246.2 lumens  
Efficiency: N/A  
Efficacy: 98.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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	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					100			
1	109	105	100	97	106	102	98	95	98	95	92	94	92	89	91	88	87	85					85			
2	99	91	85	79	97	90	83	78	86	81	76	83	78	75	80	76	73	71					71			
3	91	80	72	66	88	79	71	65	76	70	64	73	68	63	71	66	62	60					60			
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51					51			
5	77	64	55	48	75	63	54	48	61	53	48	59	52	47	57	51	47	45					45			
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39					39			
7	66	52	44	38	64	51	43	37	50	43	37	49	42	37	47	41	37	35					35			
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31					31			
9	57	44	36	30	56	43	35	30	42	35	30	41	35	30	40	34	30	28					28			
10	54	41	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25					25			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	4346	4346	4346
5°	4306	4346	4320
10°	4267	4310	4289
15°	4208	4276	4245
20°	4141	4240	4188
25°	4061	4179	4130
30°	3979	4113	4076
35°	3889	4043	4005
40°	3788	3962	3912
45°	3682	3867	3794
50°	3571	3743	3646
55°	3441	3602	3492
60°	3295	3432	3326
65°	3105	3224	3107
70°	2857	2972	2825
75°	2516	2629	2478
80°	2044	2132	2021
85°	1423	1516	1482



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	152.1	3.6
10°-20°	431.0	10.2
20°-30°	642.9	15.1
30°-40°	761.8	17.9
40°-50°	770.9	18.2
50°-60°	673.2	15.9
60°-70°	492.0	11.6
70°-80°	261.8	6.2
80°-90°	60.5	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°	1226.0	28.9
0°-40°	1987.9	46.8
0°-60°	3432.0	80.8
0°-90°	4246.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4246.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1615	1615	1615	1615	1615	
5°	1594	1597	1609	1613	1599	151
15°	1510	1520	1535	1544	1524	426
25°	1368	1384	1407	1412	1391	630
35°	1184	1202	1231	1239	1219	740
45°	967	985	1016	1017	997	746
55°	734	748	768	757	744	656
65°	488	498	506	496	488	483
75°	242	248	253	244	238	257
85°	46	47	49	50	48	58
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1615.1	1615.1	1615.1	1615.1	1615.1
2.5°	1602.5	1607.7	1613.1	1615.4	1602.3
5°	1594.1	1597.1	1609.0	1612.7	1599.1
7.5°	1580.3	1584.8	1596.4	1598.1	1585.0
10°	1561.4	1569.5	1577.2	1585.7	1569.7
12.5°	1537.4	1548.3	1561.4	1562.9	1550.8
15°	1510.3	1520.4	1534.7	1543.9	1523.9
17.5°	1480.0	1489.7	1508.2	1509.9	1497.8
20°	1446.2	1458.3	1480.5	1484.4	1462.6
22.5°	1407.8	1424.1	1442.6	1446.3	1430.3
25°	1367.6	1384.4	1407.3	1412.5	1391.1
27.5°	1325.5	1341.7	1367.4	1371.1	1353.1
30°	1280.4	1295.5	1323.8	1330.0	1311.7
32.5°	1234.6	1249.8	1281.1	1286.3	1268.5
35°	1183.8	1202.3	1230.8	1239.3	1219.3
37.5°	1132.0	1150.0	1182.3	1190.0	1168.5
40°	1078.3	1096.1	1127.9	1134.3	1113.6
42.5°	1023.4	1041.3	1075.3	1076.3	1059.1
45°	967.4	984.6	1016.2	1017.1	997.0
47.5°	910.5	927.9	956.1	952.9	934.1
50°	853.0	869.5	894.2	887.8	870.8
52.5°	793.4	809.4	832.8	822.4	806.4
55°	733.5	748.3	767.8	756.7	744.3
57.5°	673.1	688.1	703.1	691.8	681.0
60°	612.2	625.3	637.6	626.2	617.9
62.5°	550.3	561.5	572.1	561.2	553.5
65°	487.7	497.6	506.3	496.2	488.0
67.5°	425.4	433.8	441.9	431.5	422.9
70°	363.1	370.4	377.8	367.0	359.1
72.5°	301.7	308.1	314.7	304.2	297.3
75°	242.0	247.5	252.9	243.7	238.3
77.5°	184.9	189.6	193.3	187.5	182.2
80°	131.9	135.5	137.6	135.3	130.4
82.5°	84.8	87.3	88.5	88.3	85.1
85°	46.1	46.9	49.1	49.6	48.0
87.5°	17.8	19.0	19.5	21.0	19.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)