

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: P488646

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-1HI-40-120-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: P488646  
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-40-120-EDD-90  
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

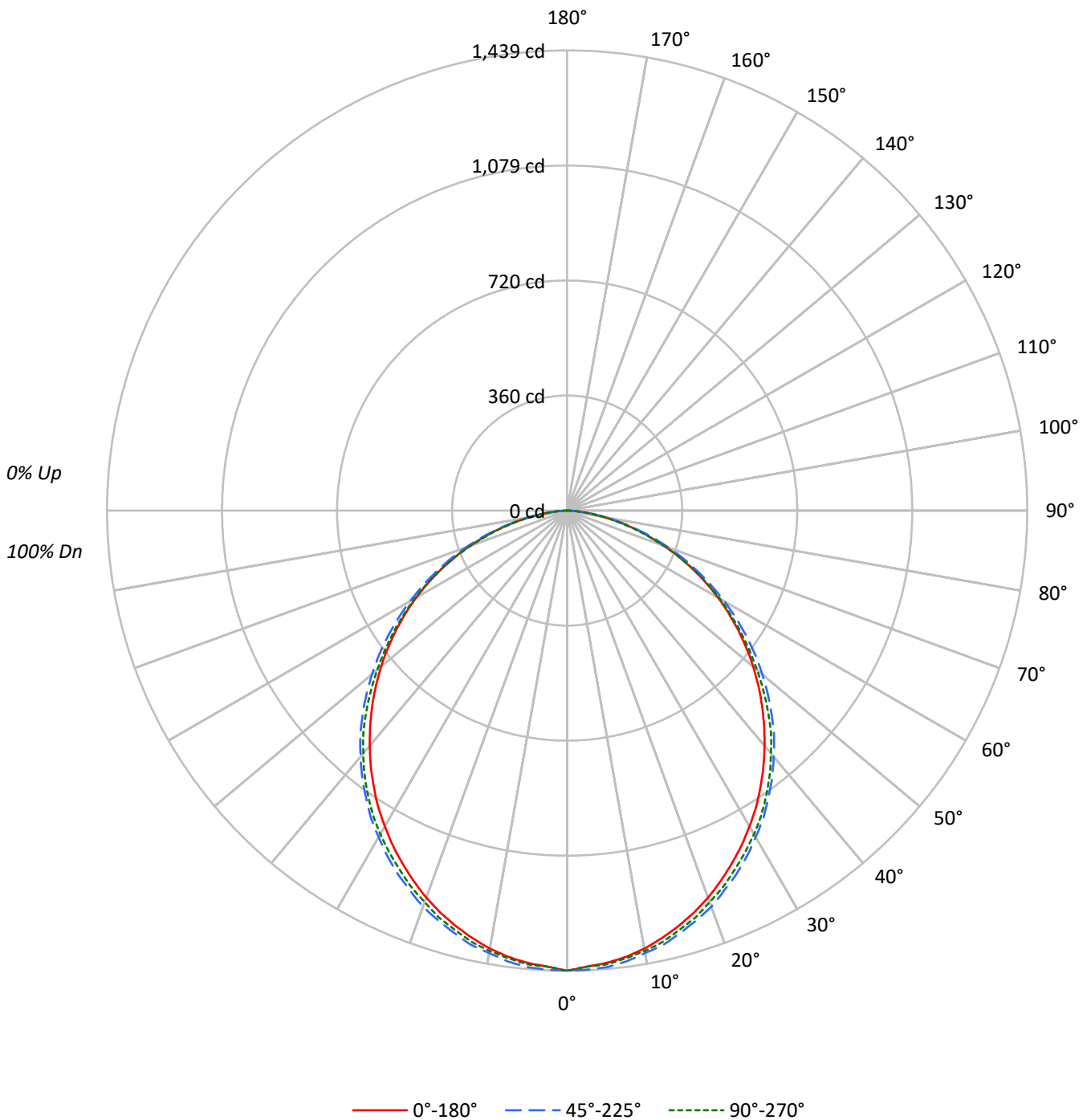
Lumens per Lamp: N/A  
Luminaire Lumens: 3782.1 lumens  
Efficiency: N/A  
Efficacy: 87.5 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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	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°	3871	3871	3871
5°	3835	3871	3847
10°	3800	3839	3820
15°	3748	3808	3781
20°	3689	3776	3731
25°	3617	3722	3679
30°	3544	3664	3630
35°	3464	3601	3568
40°	3374	3529	3484
45°	3279	3444	3380
50°	3181	3334	3247
55°	3065	3209	3110
60°	2935	3056	2962
65°	2766	2872	2768
70°	2544	2648	2517
75°	2241	2342	2206
80°	1821	1900	1801
85°	1269	1352	1318



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	135.5	3.6
10°-20°	383.9	10.2
20°-30°	572.6	15.1
30°-40°	678.6	17.9
40°-50°	686.6	18.2
50°-60°	599.6	15.9
60°-70°	438.2	11.6
70°-80°	233.2	6.2
80°-90°	53.9	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°	1092.0	28.9
0°-40°	1770.6	46.8
0°-60°	3056.9	80.8
0°-90°	3782.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3782.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1439	1439	1439	1439	1439	
5°	1420	1422	1433	1436	1424	135
15°	1345	1354	1367	1375	1357	379
25°	1218	1233	1254	1258	1239	561
35°	1054	1071	1096	1104	1086	659
45°	862	877	905	906	888	665
55°	653	666	684	674	663	584
65°	434	443	451	442	435	430
75°	216	220	225	217	212	229
85°	41	42	44	44	43	52
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1438.6	1438.6	1438.6	1438.6	1438.6
2.5°	1427.3	1432.0	1436.8	1438.9	1427.2
5°	1419.8	1422.5	1433.2	1436.5	1424.3
7.5°	1407.6	1411.6	1421.9	1423.4	1411.7
10°	1390.8	1398.0	1404.9	1412.3	1398.1
12.5°	1369.3	1379.1	1390.8	1392.1	1381.3
15°	1345.2	1354.2	1366.9	1375.2	1357.3
17.5°	1318.2	1326.9	1343.4	1344.9	1334.1
20°	1288.1	1298.9	1318.7	1322.1	1302.8
22.5°	1253.9	1268.5	1284.9	1288.2	1274.0
25°	1218.1	1233.1	1253.5	1258.1	1239.1
27.5°	1180.6	1195.0	1217.9	1221.2	1205.2
30°	1140.5	1153.9	1179.1	1184.7	1168.3
32.5°	1099.7	1113.2	1141.1	1145.7	1129.8
35°	1054.4	1070.9	1096.2	1103.9	1086.1
37.5°	1008.3	1024.3	1053.1	1060.0	1040.8
40°	960.4	976.3	1004.7	1010.4	991.9
42.5°	911.6	927.5	957.8	958.7	943.4
45°	861.7	877.0	905.1	905.9	888.1
47.5°	811.0	826.5	851.6	848.8	832.0
50°	759.8	774.4	796.5	790.8	775.6
52.5°	706.7	720.9	741.8	732.5	718.2
55°	653.3	666.5	683.9	674.0	662.9
57.5°	599.5	612.9	626.2	616.2	606.6
60°	545.3	557.0	567.9	557.7	550.4
62.5°	490.1	500.2	509.6	499.9	493.0
65°	434.4	443.2	451.0	442.0	434.7
67.5°	378.9	386.4	393.6	384.3	376.7
70°	323.4	329.9	336.5	326.9	319.9
72.5°	268.7	274.4	280.3	271.0	264.8
75°	215.5	220.5	225.3	217.0	212.2
77.5°	164.7	168.9	172.2	167.0	162.3
80°	117.5	120.7	122.6	120.5	116.2
82.5°	75.5	77.8	78.8	78.7	75.8
85°	41.1	41.8	43.8	44.2	42.7
87.5°	15.9	16.9	17.4	18.7	17.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)