

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: P488687

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-2LO-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: P488687  
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-LD4-2LO-20-120-EDD  
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

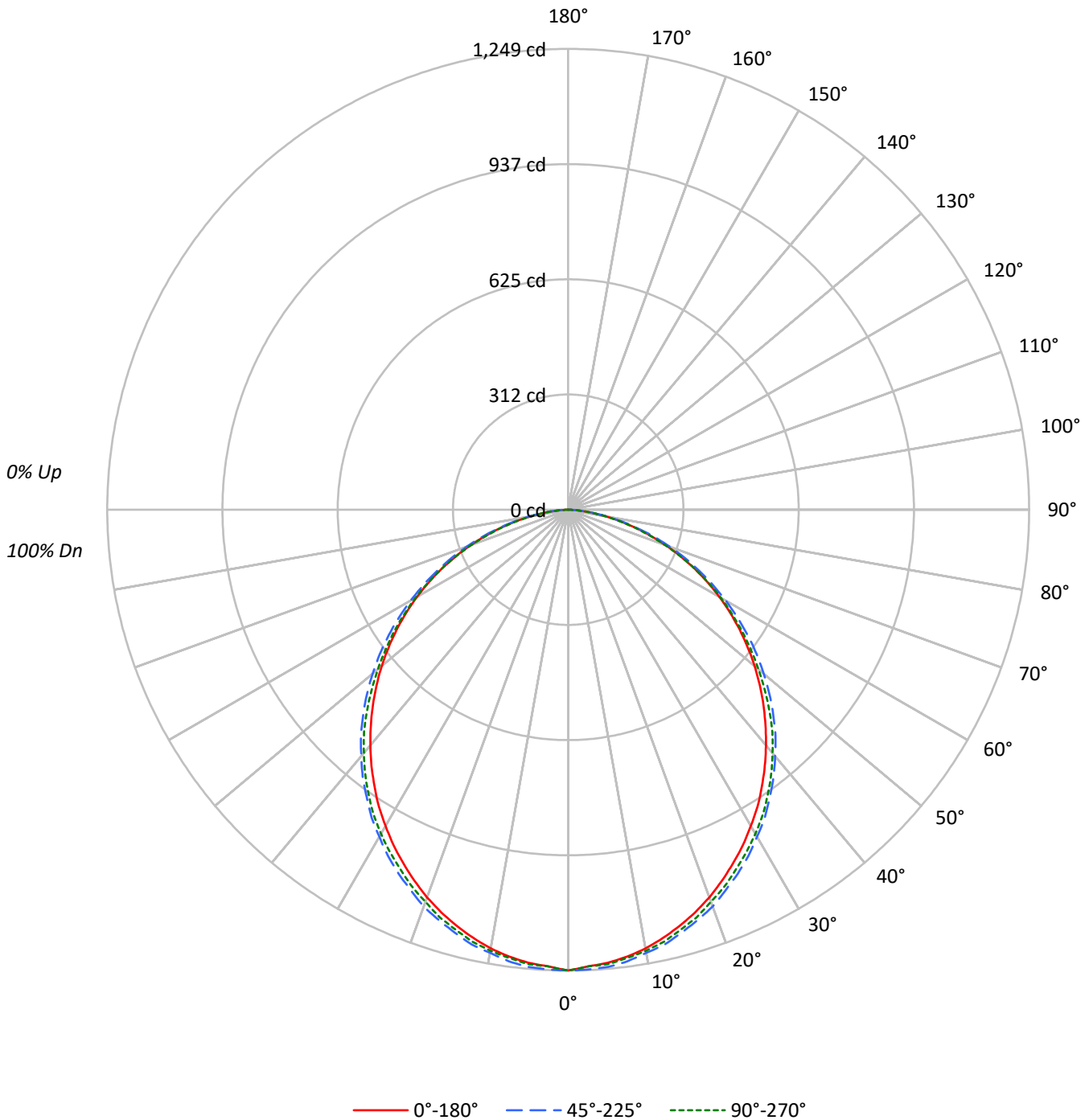
Lumens per Lamp: N/A  
Luminaire Lumens: 3283.1 lumens  
Efficiency: N/A  
Efficacy: 70.2 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
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°	3360	3360	3360
5°	3329	3361	3340
10°	3299	3332	3316
15°	3253	3306	3283
20°	3202	3278	3239
25°	3140	3231	3194
30°	3076	3181	3151
35°	3007	3126	3097
40°	2929	3064	3025
45°	2847	2990	2934
50°	2761	2894	2819
55°	2661	2785	2700
60°	2547	2653	2571
65°	2401	2493	2402
70°	2209	2298	2184
75°	1945	2034	1915
80°	1581	1649	1562
85°	1099	1173	1145



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.6	3.6
10°-20°	333.3	10.2
20°-30°	497.1	15.1
30°-40°	589.0	17.9
40°-50°	596.0	18.2
50°-60°	520.5	15.9
60°-70°	380.4	11.6
70°-80°	202.4	6.2
80°-90°	46.8	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°	948.0	28.9
0°-40°	1537.0	46.8
0°-60°	2653.5	80.8
0°-90°	3283.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3283.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1249	1249	1249	1249	1249	
5°	1232	1235	1244	1247	1236	117
15°	1168	1176	1187	1194	1178	329
25°	1057	1070	1088	1092	1076	487
35°	915	930	952	958	943	572
45°	748	761	786	786	771	577
55°	567	579	594	585	576	507
65°	377	385	392	384	377	373
75°	187	191	196	188	184	199
85°	36	36	38	38	37	45
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1248.8	1248.8	1248.8	1248.8	1248.8
2.5°	1239.0	1243.0	1247.2	1249.0	1238.9
5°	1232.5	1234.9	1244.1	1247.0	1236.4
7.5°	1221.8	1225.4	1234.3	1235.6	1225.5
10°	1207.3	1213.5	1219.5	1226.0	1213.6
12.5°	1188.7	1197.1	1207.3	1208.4	1199.1
15°	1167.7	1175.5	1186.6	1193.7	1178.3
17.5°	1144.3	1151.8	1166.2	1167.5	1158.1
20°	1118.1	1127.5	1144.7	1147.7	1130.9
22.5°	1088.5	1101.1	1115.4	1118.3	1105.9
25°	1057.4	1070.4	1088.1	1092.1	1075.6
27.5°	1024.9	1037.3	1057.3	1060.1	1046.2
30°	990.0	1001.7	1023.6	1028.4	1014.2
32.5°	954.6	966.3	990.5	994.5	980.8
35°	915.3	929.6	951.6	958.2	942.8
37.5°	875.2	889.2	914.1	920.1	903.5
40°	833.7	847.5	872.1	877.1	861.1
42.5°	791.3	805.1	831.4	832.2	818.9
45°	748.0	761.3	785.7	786.4	770.9
47.5°	704.0	717.4	739.3	736.8	722.2
50°	659.5	672.3	691.4	686.4	673.3
52.5°	613.5	625.8	643.9	635.8	623.5
55°	567.1	578.6	593.7	585.1	575.5
57.5°	520.4	532.0	543.6	534.9	526.5
60°	473.3	483.5	493.0	484.1	477.8
62.5°	425.5	434.2	442.4	433.9	427.9
65°	377.1	384.7	391.5	383.7	377.3
67.5°	328.9	335.4	341.7	333.6	327.0
70°	280.8	286.4	292.1	283.8	277.6
72.5°	233.3	238.2	243.3	235.2	229.9
75°	187.1	191.4	195.6	188.4	184.2
77.5°	143.0	146.6	149.5	144.9	140.9
80°	102.0	104.7	106.4	104.6	100.8
82.5°	65.6	67.5	68.4	68.3	65.8
85°	35.6	36.3	38.0	38.4	37.1
87.5°	13.8	14.7	15.1	16.3	15.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)