

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: P489667

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-3LO-40-120-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: P489667  
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-LD4-3LO-40-120-EDD  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

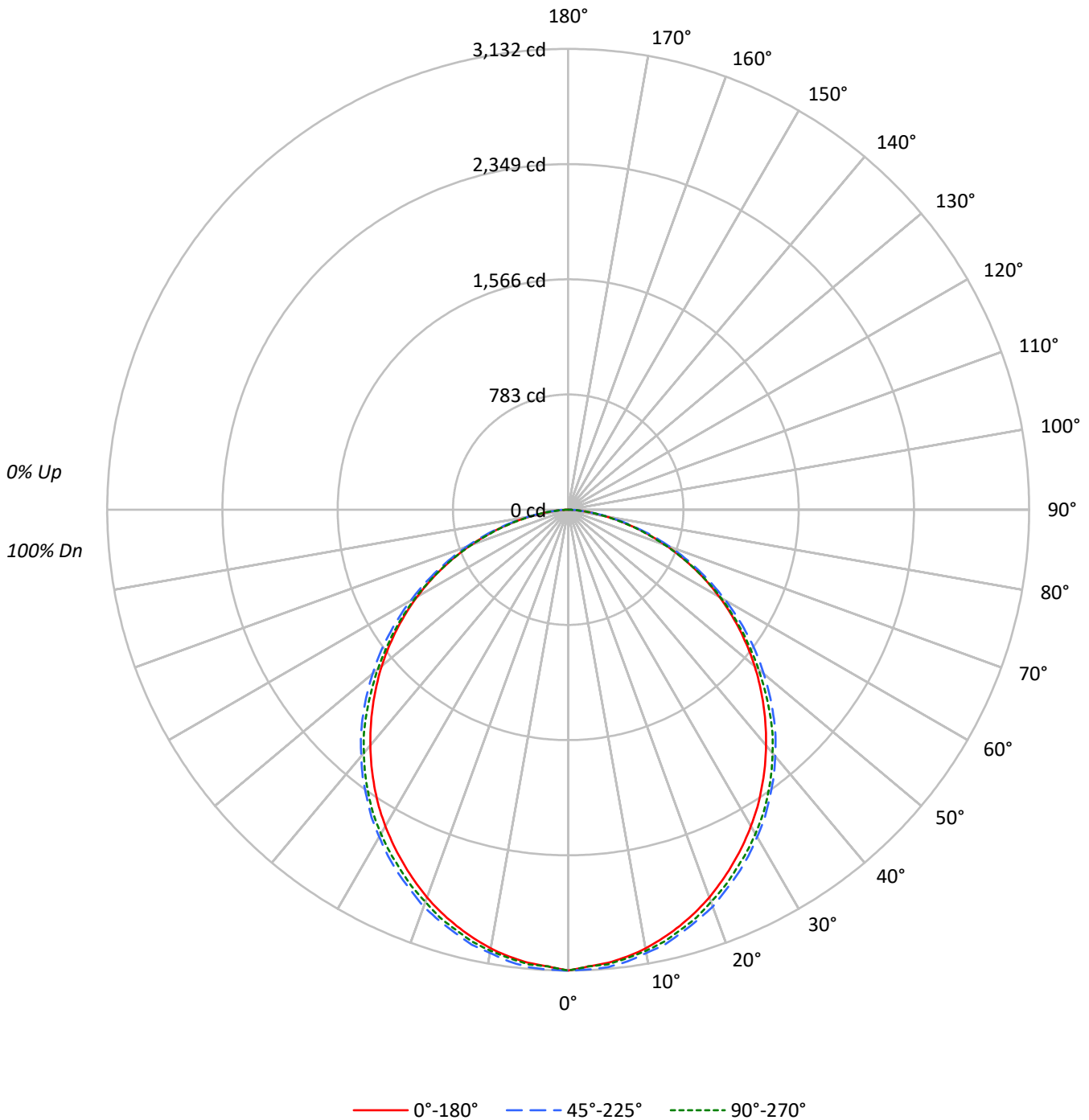
Lumens per Lamp: N/A  
Luminaire Lumens: 8234.7 lumens  
Efficiency: N/A  
Efficacy: 117.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 70.2  
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

TEST NUMBER: P489667

CATALOG NUMBER: CLM-24-4-INS-A19156-LD4-3LO-40-120-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P489667

CATALOG NUMBER: CLM-24-4-INS-A19156-LD4-3LO-40-120-EDD

**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°	4214	4214	4214
5°	4175	4215	4189
10°	4137	4179	4159
15°	4080	4146	4117
20°	4016	4111	4061
25°	3937	4052	4005
30°	3858	3989	3952
35°	3771	3920	3884
40°	3673	3842	3793
45°	3570	3750	3679
50°	3463	3630	3535
55°	3337	3493	3386
60°	3195	3327	3225
65°	3011	3126	3013
70°	2770	2882	2740
75°	2440	2550	2402
80°	1982	2068	1960
85°	1380	1471	1436



TEST NUMBER: P489667

CATALOG NUMBER: CLM-24-4-INS-A19156-LD4-3LO-40-120-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	295.0	3.6
10°-20°	835.9	10.2
20°-30°	1246.8	15.1
30°-40°	1477.4	17.9
40°-50°	1494.9	18.2
50°-60°	1305.6	15.9
60°-70°	954.1	11.6
70°-80°	507.6	6.2
80°-90°	117.3	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°	2377.7	28.9
0°-40°	3855.1	46.8
0°-60°	6655.6	80.8
0°-90°	8234.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8234.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3132	3132	3132	3132	3132	
5°	3091	3097	3120	3128	3101	293
15°	2929	2948	2976	2994	2955	826
25°	2652	2685	2729	2739	2698	1222
35°	2296	2332	2387	2404	2365	1436
45°	1876	1909	1971	1972	1934	1447
55°	1422	1451	1489	1468	1443	1272
65°	946	965	982	962	946	936
75°	469	480	490	472	462	499
85°	89	91	95	96	93	113
90°	0	0	0	0	0	



TEST NUMBER: P489667

CATALOG NUMBER: CLM-24-4-INS-A19156-LD4-3LO-40-120-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3132.2	3132.2	3132.2	3132.2	3132.2
2.5°	3107.7	3117.8	3128.3	3132.8	3107.4
5°	3091.4	3097.3	3120.4	3127.6	3101.2
7.5°	3064.6	3073.4	3096.0	3099.2	3073.8
10°	3028.1	3043.7	3058.8	3075.1	3044.1
12.5°	2981.4	3002.6	3028.1	3031.0	3007.5
15°	2928.9	2948.5	2976.2	2994.1	2955.3
17.5°	2870.1	2889.1	2925.0	2928.2	2904.7
20°	2804.5	2828.0	2871.1	2878.6	2836.5
22.5°	2730.1	2761.8	2797.7	2804.9	2773.9
25°	2652.1	2684.8	2729.2	2739.3	2697.8
27.5°	2570.6	2601.9	2651.8	2659.0	2624.1
30°	2483.1	2512.5	2567.3	2579.4	2543.8
32.5°	2394.3	2423.7	2484.4	2494.5	2459.9
35°	2295.8	2331.7	2386.8	2403.5	2364.6
37.5°	2195.3	2230.2	2292.8	2307.9	2266.1
40°	2091.2	2125.8	2187.4	2199.8	2159.7
42.5°	1984.8	2019.4	2085.3	2087.3	2054.0
45°	1876.1	1909.4	1970.8	1972.4	1933.5
47.5°	1765.8	1799.4	1854.2	1848.0	1811.5
50°	1654.2	1686.2	1734.2	1721.8	1688.8
52.5°	1538.7	1569.7	1615.0	1594.8	1563.8
55°	1422.5	1451.2	1489.1	1467.5	1443.4
57.5°	1305.3	1334.4	1363.4	1341.6	1320.7
60°	1187.2	1212.7	1236.5	1214.3	1198.3
62.5°	1067.1	1089.0	1109.5	1088.3	1073.3
65°	945.7	965.0	981.9	962.4	946.4
67.5°	825.0	841.3	857.0	836.7	820.1
70°	704.2	718.3	732.6	711.7	696.4
72.5°	585.1	597.5	610.3	590.0	576.6
75°	469.3	480.0	490.5	472.5	462.1
77.5°	358.6	367.8	375.0	363.5	353.4
80°	255.8	262.7	266.9	262.4	252.9
82.5°	164.5	169.4	171.7	171.3	165.1
85°	89.4	91.0	95.3	96.3	93.0
87.5°	34.6	36.9	37.9	40.8	37.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)