

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: P489722

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5HI-30-120-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: P489722  
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-LD4-5HI-30-120-EDD-90  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

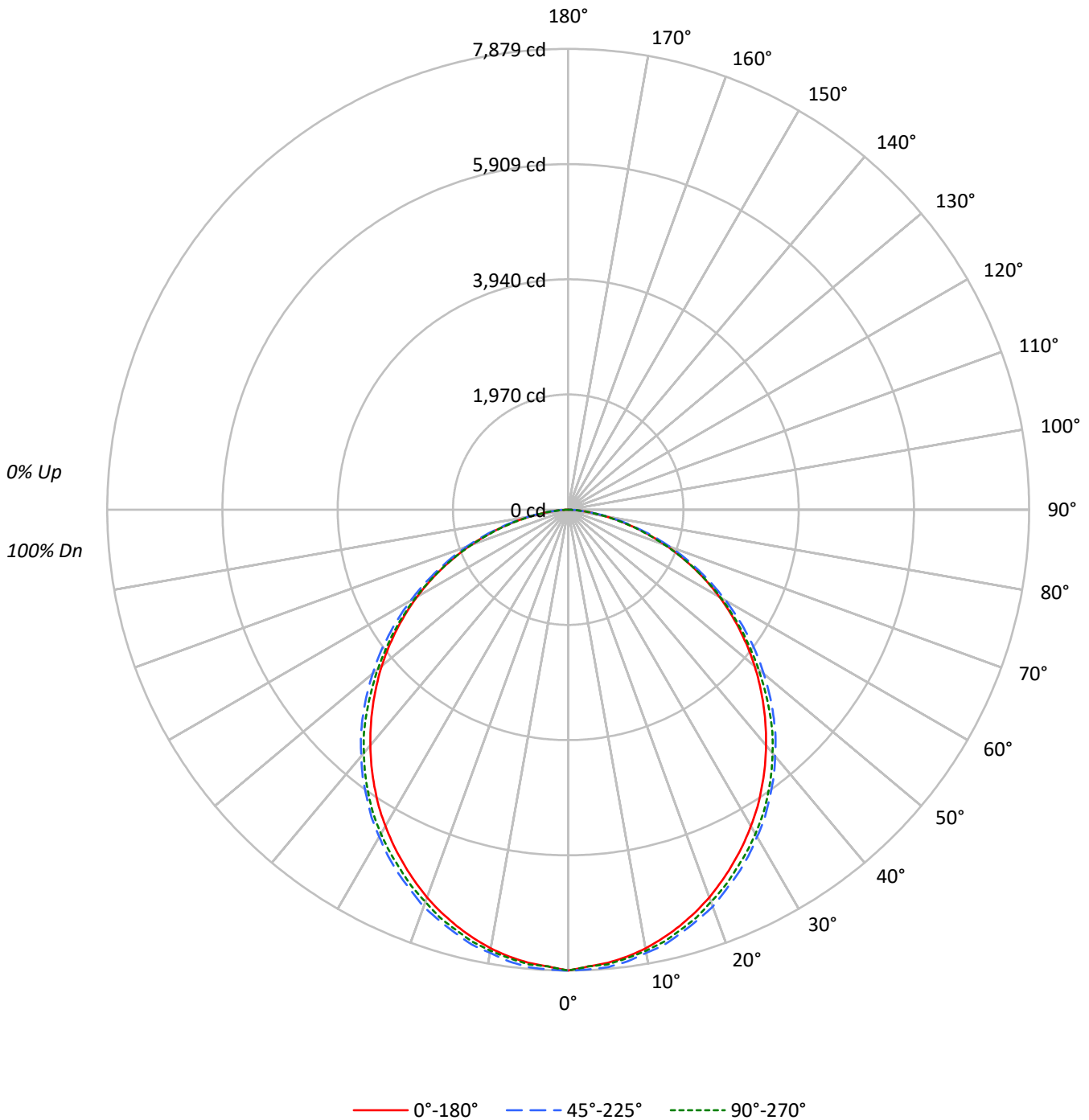
Lumens per Lamp: N/A  
Luminaire Lumens: 20714.5 lumens  
Efficiency: N/A  
Efficacy: 95.9 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 216  
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: P489722

CATALOG NUMBER: CLM-24-4-INS-A19156-LD4-5HI-30-120-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P489722

CATALOG NUMBER: CLM-24-4-INS-A19156-LD4-5HI-30-120-EDD-90

**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°	10601	10601	10601
5°	10503	10602	10536
10°	10407	10512	10462
15°	10263	10429	10355
20°	10101	10341	10217
25°	9904	10192	10075
30°	9704	10034	9942
35°	9486	9862	9770
40°	9239	9665	9542
45°	8980	9433	9255
50°	8710	9131	8892
55°	8394	8787	8517
60°	8037	8370	8112
65°	7574	7864	7579
70°	6969	7250	6891
75°	6137	6414	6043
80°	4987	5203	4930
85°	3472	3700	3612



TEST NUMBER: P489722

CATALOG NUMBER: CLM-24-4-INS-A19156-LD4-5HI-30-120-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	742.0	3.6
10°-20°	2102.8	10.2
20°-30°	3136.2	15.1
30°-40°	3716.5	17.9
40°-50°	3760.5	18.2
50°-60°	3284.3	15.9
60°-70°	2400.0	11.6
70°-80°	1277.0	6.2
80°-90°	295.1	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°	5981.1	28.9
0°-40°	9697.6	46.8
0°-60°	16742.4	80.8
0°-90°	20714.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	20714.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	7879	7879	7879	7879	7879	
5°	7776	7791	7850	7868	7801	737
15°	7368	7417	7487	7532	7434	2077
25°	6672	6754	6865	6891	6786	3074
35°	5775	5865	6004	6046	5948	3612
45°	4719	4803	4958	4962	4864	3641
55°	3578	3651	3746	3692	3631	3199
65°	2379	2427	2470	2421	2381	2354
75°	1180	1208	1234	1189	1162	1255
85°	225	229	240	242	234	285
90°	0	0	0	0	0	



TEST NUMBER: P489722

CATALOG NUMBER: CLM-24-4-INS-A19156-LD4-5HI-30-120-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	7879.1	7879.1	7879.1	7879.1	7879.1
2.5°	7817.5	7842.9	7869.2	7880.7	7816.7
5°	7776.4	7791.2	7849.5	7867.6	7801.1
7.5°	7709.1	7731.3	7787.9	7796.1	7732.1
10°	7617.2	7656.6	7694.4	7735.4	7657.4
12.5°	7499.8	7553.2	7617.2	7624.6	7565.5
15°	7367.6	7416.9	7486.7	7531.8	7434.1
17.5°	7219.9	7267.5	7357.8	7366.0	7306.9
20°	7054.9	7114.0	7222.3	7241.2	7135.3
22.5°	6867.7	6947.3	7037.6	7055.7	6977.7
25°	6671.5	6753.6	6865.2	6890.7	6786.4
27.5°	6466.3	6545.1	6670.7	6688.7	6600.9
30°	6246.3	6320.2	6458.1	6488.4	6399.0
32.5°	6023.0	6096.9	6249.6	6275.0	6188.0
35°	5775.1	5865.4	6004.1	6046.0	5948.3
37.5°	5522.2	5610.1	5767.7	5805.4	5700.4
40°	5260.4	5347.4	5502.5	5533.7	5432.8
42.5°	4992.8	5079.8	5245.6	5250.5	5166.8
45°	4719.4	4803.1	4957.5	4961.6	4863.9
47.5°	4441.9	4526.5	4664.4	4648.8	4556.9
50°	4161.2	4241.6	4362.3	4331.1	4248.2
52.5°	3870.6	3948.6	4062.7	4011.8	3933.8
55°	3578.3	3650.6	3745.8	3691.6	3630.9
57.5°	3283.6	3356.7	3429.7	3374.7	3322.2
60°	2986.5	3050.5	3110.4	3054.6	3014.4
62.5°	2684.4	2739.4	2791.1	2737.7	2700.0
65°	2379.0	2427.4	2470.1	2420.9	2380.6
67.5°	2075.3	2116.3	2155.7	2104.8	2062.9
70°	1771.5	1806.8	1842.9	1790.4	1751.8
72.5°	1471.9	1503.1	1535.1	1484.2	1450.5
75°	1180.5	1207.6	1233.8	1188.7	1162.4
77.5°	902.2	925.2	943.2	914.5	889.0
80°	643.6	660.8	671.5	660.0	636.2
82.5°	413.7	426.1	431.8	431.0	415.4
85°	224.9	229.0	239.7	242.2	234.0
87.5°	87.0	92.8	95.2	102.6	94.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)