

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: P489209

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-5STD-35-120-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: P489209  
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-24-2-INS-A19156-LD4-5STD-35-120-EDD  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

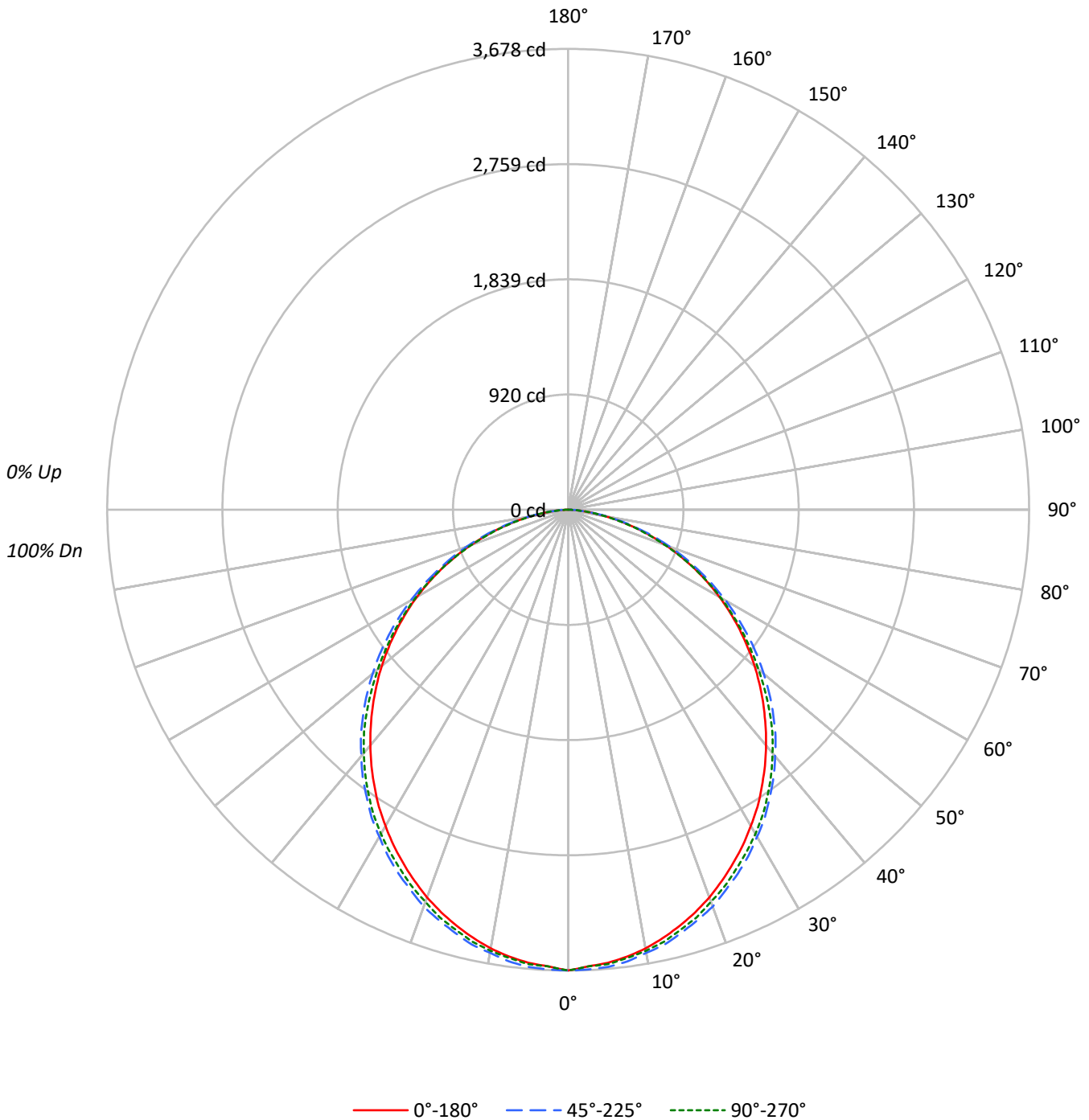
Lumens per Lamp: N/A  
Luminaire Lumens: 9668.4 lumens  
Efficiency: N/A  
Efficacy: 116.2 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 83.2  
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°	9896	9896	9896
5°	9804	9897	9836
10°	9715	9813	9766
15°	9580	9735	9667
20°	9430	9653	9537
25°	9246	9514	9405
30°	9059	9366	9280
35°	8855	9206	9120
40°	8625	9022	8907
45°	8383	8806	8640
50°	8131	8524	8301
55°	7836	8202	7951
60°	7502	7814	7572
65°	7070	7341	7075
70°	6505	6768	6434
75°	5729	5988	5640
80°	4655	4857	4601
85°	3242	3455	3372



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	346.3	3.6
10°-20°	981.5	10.2
20°-30°	1463.8	15.1
30°-40°	1734.7	17.9
40°-50°	1755.2	18.2
50°-60°	1532.9	15.9
60°-70°	1120.2	11.6
70°-80°	596.0	6.2
80°-90°	137.8	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°	2791.7	28.9
0°-40°	4526.3	46.8
0°-60°	7814.4	80.8
0°-90°	9668.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9668.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3678	3678	3678	3678	3678	
5°	3630	3636	3664	3672	3641	344
15°	3439	3462	3494	3515	3470	969
25°	3114	3152	3204	3216	3168	1435
35°	2696	2738	2802	2822	2776	1686
45°	2203	2242	2314	2316	2270	1699
55°	1670	1704	1748	1723	1695	1493
65°	1110	1133	1153	1130	1111	1099
75°	551	564	576	555	542	586
85°	105	107	112	113	109	133
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3677.5	3677.5	3677.5	3677.5	3677.5
2.5°	3648.8	3660.7	3672.9	3678.3	3648.4
5°	3629.6	3636.5	3663.7	3672.2	3641.1
7.5°	3598.2	3608.5	3635.0	3638.8	3608.9
10°	3555.3	3573.7	3591.3	3610.5	3574.1
12.5°	3500.5	3525.4	3555.3	3558.7	3531.2
15°	3438.8	3461.8	3494.4	3515.4	3469.8
17.5°	3369.8	3392.1	3434.2	3438.0	3410.5
20°	3292.8	3320.4	3371.0	3379.8	3330.4
22.5°	3205.5	3242.6	3284.8	3293.2	3256.8
25°	3113.9	3152.2	3204.3	3216.2	3167.5
27.5°	3018.1	3054.9	3113.5	3121.9	3080.9
30°	2915.4	2949.9	3014.3	3028.5	2986.7
32.5°	2811.2	2845.7	2917.0	2928.8	2888.2
35°	2695.5	2737.6	2802.4	2821.9	2776.3
37.5°	2577.5	2618.5	2692.0	2709.7	2660.6
40°	2455.3	2495.9	2568.3	2582.8	2535.7
42.5°	2330.3	2371.0	2448.4	2450.7	2411.6
45°	2202.8	2241.8	2313.9	2315.8	2270.2
47.5°	2073.2	2112.7	2177.1	2169.8	2126.9
50°	1942.2	1979.8	2036.1	2021.5	1982.8
52.5°	1806.6	1843.0	1896.2	1872.5	1836.1
55°	1670.2	1703.9	1748.3	1723.0	1694.7
57.5°	1532.6	1566.7	1600.8	1575.1	1550.6
60°	1393.9	1423.8	1451.8	1425.7	1406.9
62.5°	1252.9	1278.6	1302.7	1277.8	1260.2
65°	1110.4	1133.0	1152.9	1129.9	1111.1
67.5°	968.6	987.8	1006.2	982.4	962.9
70°	826.8	843.3	860.2	835.7	817.7
72.5°	687.0	701.6	716.5	692.7	677.0
75°	551.0	563.6	575.9	554.8	542.5
77.5°	421.1	431.8	440.2	426.8	415.0
80°	300.4	308.4	313.4	308.1	296.9
82.5°	193.1	198.9	201.5	201.2	193.9
85°	105.0	106.9	111.9	113.0	109.2
87.5°	40.6	43.3	44.4	47.9	44.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)