

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: P489673

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-3STD-27-120-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: P489673  
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-LD4-3STD-27-120-EDD  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

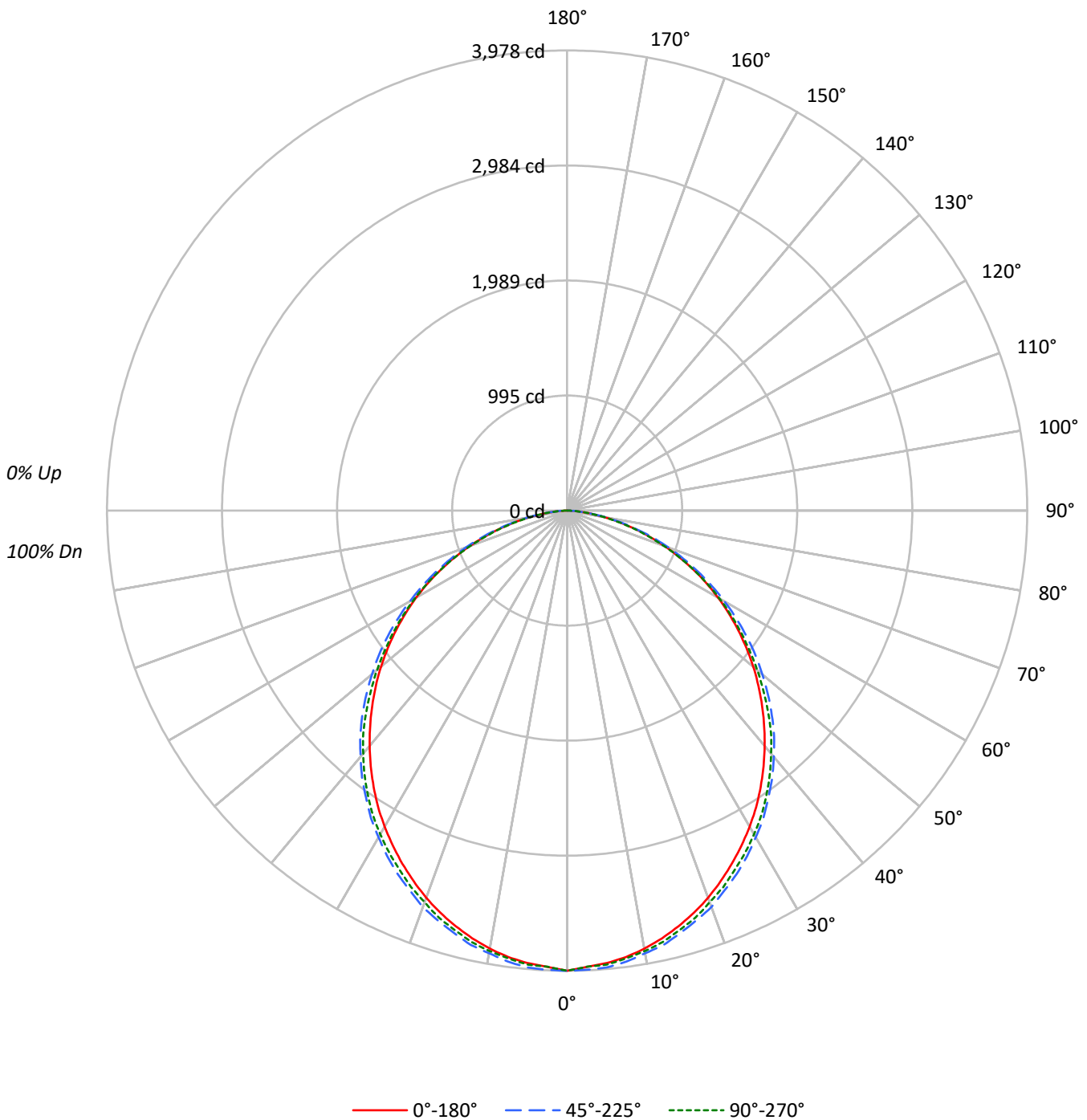
Lumens per Lamp: N/A  
Luminaire Lumens: 10459.8 lumens  
Efficiency: N/A  
Efficacy: 104.7 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
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°	5353	5353	5353
5°	5304	5353	5320
10°	5255	5308	5283
15°	5182	5266	5229
20°	5101	5222	5159
25°	5001	5146	5087
30°	4900	5066	5020
35°	4790	4980	4934
40°	4665	4880	4818
45°	4535	4763	4673
50°	4398	4611	4490
55°	4239	4437	4301
60°	4058	4226	4096
65°	3825	3971	3827
70°	3519	3661	3480
75°	3099	3239	3052
80°	2518	2627	2490
85°	1754	1868	1823



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	374.7	3.6
10°-20°	1061.8	10.2
20°-30°	1583.7	15.1
30°-40°	1876.6	17.9
40°-50°	1898.9	18.2
50°-60°	1658.4	15.9
60°-70°	1211.9	11.6
70°-80°	644.8	6.2
80°-90°	149.0	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°	3020.2	28.9
0°-40°	4896.8	46.8
0°-60°	8454.1	80.8
0°-90°	10459.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10459.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3978	3978	3978	3978	3978	
5°	3927	3934	3964	3973	3939	372
15°	3720	3745	3780	3803	3754	1049
25°	3369	3410	3467	3480	3427	1552
35°	2916	2962	3032	3053	3004	1824
45°	2383	2425	2503	2505	2456	1838
55°	1807	1843	1891	1864	1833	1615
65°	1201	1226	1247	1222	1202	1189
75°	596	610	623	600	587	634
85°	114	116	121	122	118	144
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3978.5	3978.5	3978.5	3978.5	3978.5
2.5°	3947.4	3960.3	3973.6	3979.4	3947.0
5°	3926.7	3934.2	3963.6	3972.7	3939.2
7.5°	3892.7	3903.9	3932.5	3936.7	3904.3
10°	3846.3	3866.2	3885.3	3906.0	3866.6
12.5°	3787.0	3814.0	3846.3	3850.0	3820.2
15°	3720.3	3745.2	3780.4	3803.2	3753.9
17.5°	3645.7	3669.7	3715.3	3719.5	3689.6
20°	3562.4	3592.2	3646.9	3656.5	3603.0
22.5°	3467.9	3508.1	3553.7	3562.8	3523.4
25°	3368.8	3410.2	3466.6	3479.5	3426.8
27.5°	3265.2	3304.9	3368.4	3377.5	3333.1
30°	3154.1	3191.4	3261.0	3276.3	3231.2
32.5°	3041.3	3078.6	3155.7	3168.6	3124.6
35°	2916.1	2961.7	3031.8	3052.9	3003.6
37.5°	2788.5	2832.8	2912.4	2931.5	2878.4
40°	2656.2	2700.2	2778.5	2794.3	2743.3
42.5°	2521.1	2565.0	2648.8	2651.3	2609.0
45°	2383.1	2425.3	2503.3	2505.3	2456.0
47.5°	2243.0	2285.6	2355.3	2347.4	2301.0
50°	2101.2	2141.8	2202.7	2187.0	2145.1
52.5°	1954.4	1993.8	2051.4	2025.7	1986.4
55°	1806.9	1843.4	1891.4	1864.1	1833.4
57.5°	1658.1	1695.0	1731.9	1704.1	1677.6
60°	1508.0	1540.3	1570.6	1542.4	1522.1
62.5°	1355.5	1383.2	1409.4	1382.4	1363.3
65°	1201.3	1225.7	1247.3	1222.4	1202.1
67.5°	1047.9	1068.6	1088.5	1062.8	1041.7
70°	894.5	912.4	930.6	904.1	884.6
72.5°	743.2	759.0	775.1	749.4	732.5
75°	596.1	609.8	623.0	600.2	587.0
77.5°	455.6	467.2	476.3	461.8	448.9
80°	325.0	333.7	339.1	333.3	321.3
82.5°	208.9	215.1	218.0	217.6	209.7
85°	113.6	115.7	121.0	122.3	118.1
87.5°	43.9	46.8	48.1	51.8	47.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)