

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: P489153

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-4HI-50-120-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: P489153  
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-LD4-4HI-50-120-EDD  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

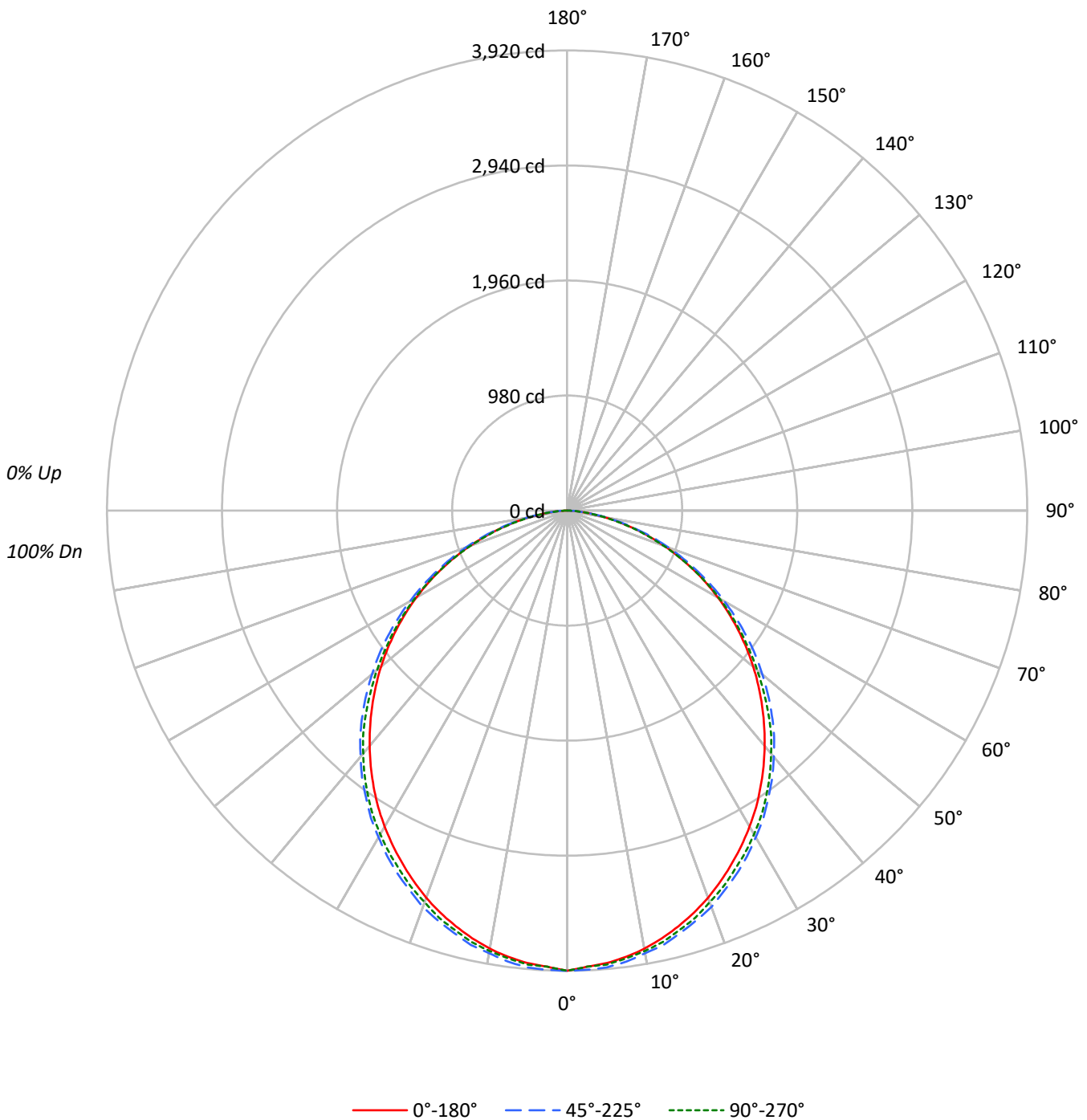
Lumens per Lamp: N/A  
Luminaire Lumens: 10306.6 lumens  
Efficiency: N/A  
Efficacy: 119.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 86.4  
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°	10549	10549	10549
5°	10452	10550	10485
10°	10356	10461	10411
15°	10213	10378	10305
20°	10052	10291	10167
25°	9856	10142	10026
30°	9657	9984	9893
35°	9439	9814	9723
40°	9194	9617	9496
45°	8936	9387	9210
50°	8668	9087	8849
55°	8353	8744	8476
60°	7997	8329	8072
65°	7537	7826	7542
70°	6935	7215	6858
75°	6106	6383	6014
80°	4962	5177	4905
85°	3455	3683	3594



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	369.2	3.6
10°-20°	1046.3	10.2
20°-30°	1560.5	15.1
30°-40°	1849.1	17.9
40°-50°	1871.1	18.2
50°-60°	1634.1	15.9
60°-70°	1194.1	11.6
70°-80°	635.4	6.2
80°-90°	146.9	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°	2975.9	28.9
0°-40°	4825.1	46.8
0°-60°	8330.2	80.8
0°-90°	10306.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10306.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3920	3920	3920	3920	3920	
5°	3869	3877	3906	3914	3882	367
15°	3666	3690	3725	3748	3699	1033
25°	3319	3360	3416	3428	3377	1529
35°	2873	2918	2987	3008	2960	1797
45°	2348	2390	2467	2469	2420	1812
55°	1780	1816	1864	1837	1807	1592
65°	1184	1208	1229	1204	1184	1171
75°	587	601	614	591	578	624
85°	112	114	119	120	116	142
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3920.3	3920.3	3920.3	3920.3	3920.3
2.5°	3889.6	3902.3	3915.4	3921.1	3889.2
5°	3869.2	3876.6	3905.6	3914.5	3881.5
7.5°	3835.7	3846.7	3874.9	3879.0	3847.2
10°	3790.0	3809.6	3828.4	3848.8	3810.0
12.5°	3731.6	3758.1	3790.0	3793.6	3764.2
15°	3665.8	3690.3	3725.0	3747.5	3698.9
17.5°	3592.3	3616.0	3660.9	3665.0	3635.6
20°	3510.2	3539.6	3593.5	3602.9	3550.2
22.5°	3417.1	3456.7	3501.6	3510.6	3471.8
25°	3319.4	3360.3	3415.8	3428.5	3376.6
27.5°	3217.3	3256.5	3319.0	3328.0	3284.3
30°	3107.9	3144.6	3213.2	3228.4	3183.8
32.5°	2996.8	3033.5	3109.5	3122.2	3078.9
35°	2873.4	2918.3	2987.4	3008.2	2959.6
37.5°	2747.6	2791.3	2869.7	2888.5	2836.2
40°	2617.3	2660.6	2737.8	2753.3	2703.1
42.5°	2484.2	2527.5	2610.0	2612.4	2570.8
45°	2348.2	2389.8	2466.6	2468.6	2420.0
47.5°	2210.1	2252.2	2320.8	2313.0	2267.3
50°	2070.4	2110.4	2170.5	2155.0	2113.7
52.5°	1925.8	1964.6	2021.4	1996.1	1957.3
55°	1780.4	1816.4	1863.7	1836.8	1806.6
57.5°	1633.8	1670.1	1706.5	1679.1	1653.0
60°	1485.9	1517.8	1547.6	1519.8	1499.8
62.5°	1335.6	1363.0	1388.7	1362.2	1343.4
65°	1183.7	1207.8	1229.0	1204.5	1184.5
67.5°	1032.6	1053.0	1072.6	1047.3	1026.4
70°	881.4	899.0	917.0	890.8	871.6
72.5°	732.3	747.9	763.8	738.5	721.7
75°	587.3	600.8	613.9	591.4	578.4
77.5°	448.9	460.3	469.3	455.0	442.3
80°	320.2	328.8	334.1	328.4	316.5
82.5°	205.9	212.0	214.8	214.4	206.7
85°	111.9	114.0	119.3	120.5	116.4
87.5°	43.3	46.2	47.4	51.1	47.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)