

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: P489188

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-5HI-50-120-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: P489188  
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-LD4-5HI-50-120-EDD-90  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

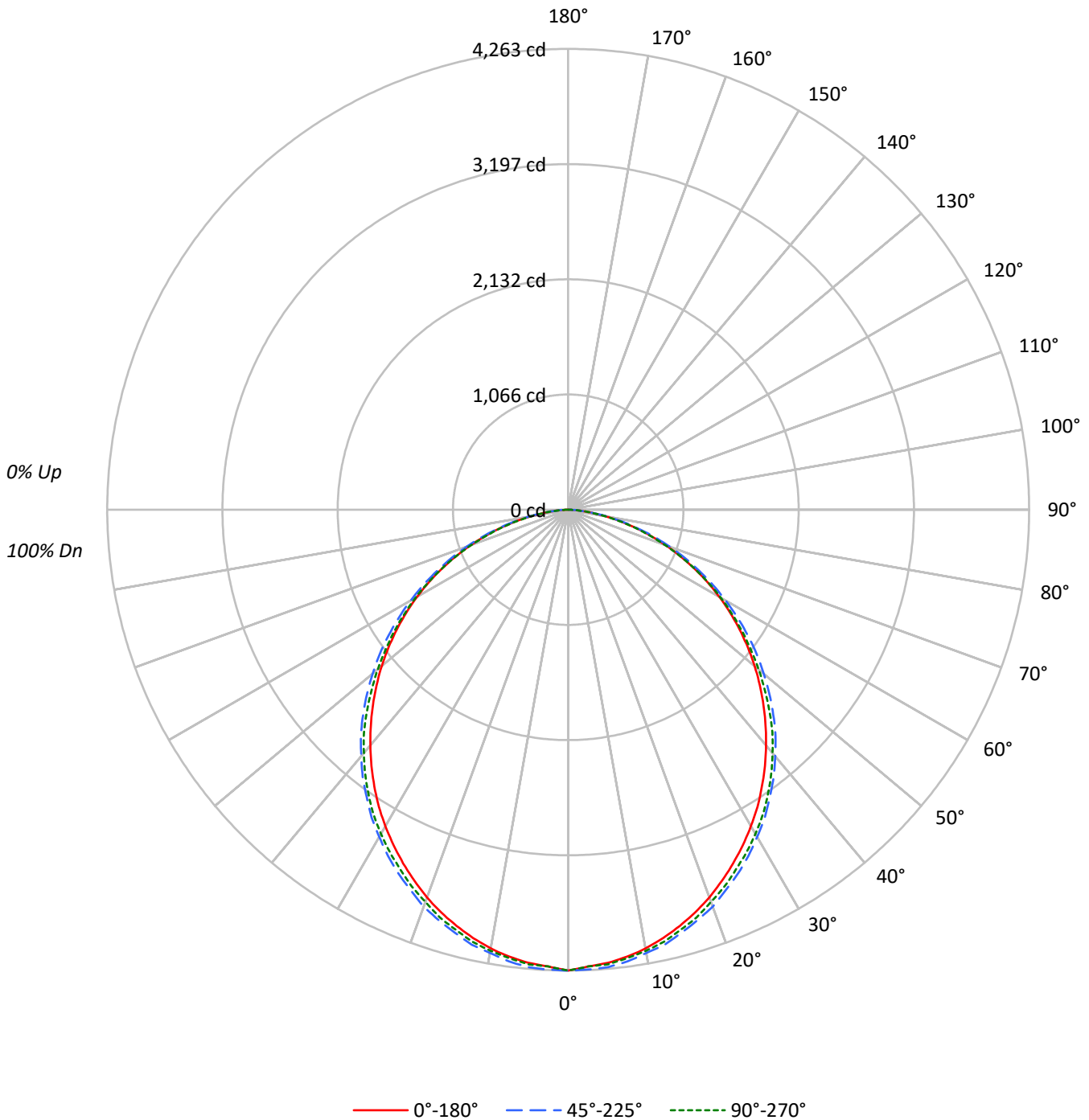
Lumens per Lamp: N/A  
Luminaire Lumens: 11208.4 lumens  
Efficiency: N/A  
Efficacy: 103.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 108  
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°	11472	11472	11472
5°	11366	11473	11402
10°	11262	11376	11322
15°	11106	11286	11206
20°	10932	11191	11056
25°	10718	11030	10903
30°	10502	10858	10759
35°	10265	10673	10573
40°	9999	10459	10326
45°	9718	10208	10016
50°	9426	9882	9623
55°	9084	9509	9217
60°	8697	9058	8778
65°	8196	8510	8202
70°	7541	7846	7458
75°	6641	6941	6540
80°	5396	5630	5334
85°	3758	4005	3909



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	401.5	3.6
10°-20°	1137.8	10.2
20°-30°	1697.0	15.1
30°-40°	2011.0	17.9
40°-50°	2034.8	18.2
50°-60°	1777.1	15.9
60°-70°	1298.6	11.6
70°-80°	691.0	6.2
80°-90°	159.7	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°	3236.3	28.9
0°-40°	5247.3	46.8
0°-60°	9059.1	80.8
0°-90°	11208.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11208.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4263	4263	4263	4263	4263	
5°	4208	4216	4247	4257	4221	399
15°	3986	4013	4051	4075	4022	1124
25°	3610	3654	3715	3728	3672	1663
35°	3125	3174	3249	3271	3219	1954
45°	2554	2599	2682	2685	2632	1970
55°	1936	1975	2027	1998	1965	1731
65°	1287	1314	1336	1310	1288	1274
75°	639	653	668	643	629	679
85°	122	124	130	131	127	154
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4263.3	4263.3	4263.3	4263.3	4263.3
2.5°	4230.0	4243.7	4257.9	4264.2	4229.5
5°	4207.8	4215.7	4247.3	4257.1	4221.1
7.5°	4171.3	4183.3	4214.0	4218.4	4183.8
10°	4121.6	4142.9	4163.3	4185.5	4143.3
12.5°	4058.1	4086.9	4121.6	4125.6	4093.6
15°	3986.5	4013.2	4051.0	4075.4	4022.5
17.5°	3906.6	3932.4	3981.2	3985.7	3953.7
20°	3817.3	3849.3	3907.9	3918.1	3860.8
22.5°	3716.0	3759.1	3808.0	3817.8	3775.6
25°	3609.9	3654.3	3714.7	3728.5	3672.1
27.5°	3498.8	3541.5	3609.4	3619.2	3571.7
30°	3379.8	3419.8	3494.4	3510.8	3462.4
32.5°	3259.0	3299.0	3381.6	3395.3	3348.3
35°	3124.8	3173.7	3248.8	3271.4	3218.6
37.5°	2988.0	3035.6	3120.8	3141.3	3084.4
40°	2846.3	2893.4	2977.4	2994.2	2939.6
42.5°	2701.5	2748.6	2838.3	2841.0	2795.7
45°	2553.6	2598.9	2682.4	2684.6	2631.8
47.5°	2403.5	2449.2	2523.9	2515.4	2465.7
50°	2251.6	2295.1	2360.4	2343.5	2298.7
52.5°	2094.3	2136.5	2198.3	2170.7	2128.5
55°	1936.2	1975.3	2026.8	1997.5	1964.6
57.5°	1776.7	1816.3	1855.8	1826.0	1797.6
60°	1615.9	1650.6	1683.0	1652.8	1631.0
62.5°	1452.5	1482.2	1510.2	1481.4	1460.9
65°	1287.2	1313.5	1336.5	1309.9	1288.1
67.5°	1122.9	1145.1	1166.4	1138.9	1116.2
70°	958.5	977.6	997.2	968.8	947.9
72.5°	796.4	813.3	830.6	803.1	784.9
75°	638.7	653.4	667.6	643.2	629.0
77.5°	488.2	500.6	510.4	494.8	481.1
80°	348.2	357.6	363.3	357.1	344.2
82.5°	223.9	230.5	233.6	233.2	224.8
85°	121.7	123.9	129.7	131.0	126.6
87.5°	47.1	50.2	51.5	55.5	51.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)