

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: P489724

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5HI-35-120-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: P489724  
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-35-120-EDD-90  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

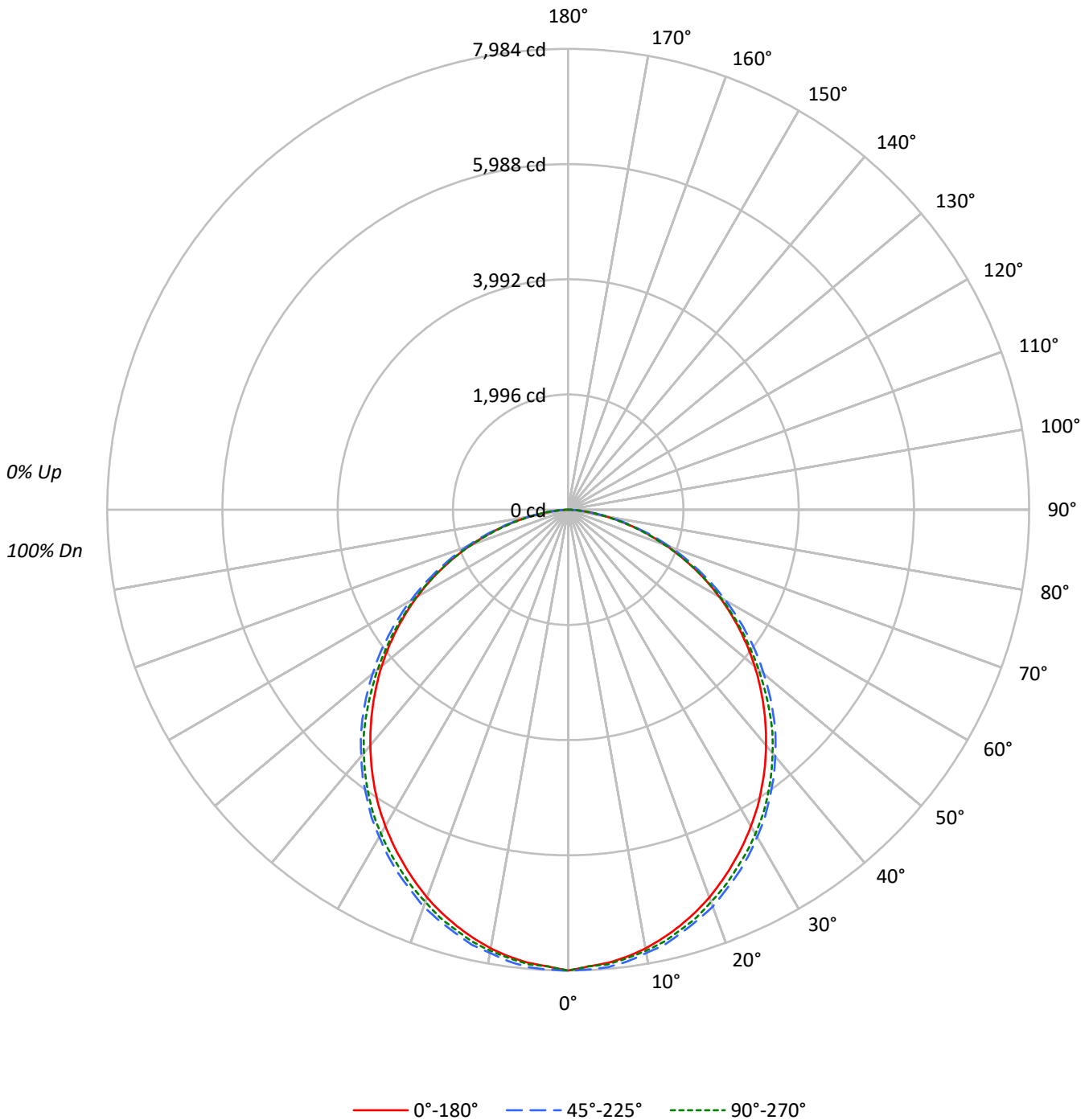
Lumens per Lamp: N/A  
Luminaire Lumens: 20991.3 lumens  
Efficiency: N/A  
Efficacy: 97.2 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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

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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	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					100			
1	109	105	100	97	106	102	98	95	98	95	92	94	92	89	91	88	87	85					85			
2	99	91	85	79	97	90	83	78	86	81	76	83	78	75	80	76	73	71					71			
3	91	80	72	66	88	79	71	65	76	70	64	73	68	63	71	66	62	60					60			
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51					51			
5	77	64	55	48	75	63	54	48	61	53	48	59	52	47	57	51	47	45					45			
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39					39			
7	66	52	44	38	64	51	43	37	50	43	37	49	42	37	47	41	37	35					35			
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31					31			
9	57	44	36	30	56	43	35	30	42	35	30	41	35	30	40	34	30	28					28			
10	54	41	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25					25			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	10743	10743	10743
5°	10643	10743	10677
10°	10546	10653	10602
15°	10400	10568	10494
20°	10236	10479	10353
25°	10037	10328	10210
30°	9834	10168	10075
35°	9612	9994	9901
40°	9363	9794	9670
45°	9100	9559	9379
50°	8827	9253	9011
55°	8506	8904	8631
60°	8144	8482	8220
65°	7675	7969	7680
70°	7062	7347	6984
75°	6219	6500	6123
80°	5053	5273	4995
85°	3518	3750	3660



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	752.0	3.6
10°-20°	2130.9	10.2
20°-30°	3178.2	15.1
30°-40°	3766.1	17.9
40°-50°	3810.8	18.2
50°-60°	3328.1	15.9
60°-70°	2432.1	11.6
70°-80°	1294.1	6.2
80°-90°	299.1	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°	6061.0	28.9
0°-40°	9827.2	46.8
0°-60°	16966.1	80.8
0°-90°	20991.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	20991.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	7984	7984	7984	7984	7984	
5°	7880	7895	7954	7973	7905	747
15°	7466	7516	7587	7632	7534	2105
25°	6761	6844	6957	6983	6877	3115
35°	5852	5944	6084	6127	6028	3660
45°	4782	4867	5024	5028	4929	3690
55°	3626	3699	3796	3741	3679	3241
65°	2411	2460	2503	2453	2412	2386
75°	1196	1224	1250	1205	1178	1272
85°	228	232	243	245	237	289
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	7984.3	7984.3	7984.3	7984.3	7984.3
2.5°	7922.0	7947.7	7974.4	7986.0	7921.1
5°	7880.4	7895.3	7954.4	7972.7	7905.3
7.5°	7812.1	7834.6	7892.0	7900.3	7835.4
10°	7719.0	7758.9	7797.2	7838.8	7759.7
12.5°	7600.0	7654.1	7719.0	7726.5	7666.6
15°	7466.1	7516.0	7586.7	7632.5	7533.5
17.5°	7316.3	7364.6	7456.1	7464.4	7404.5
20°	7149.1	7209.0	7318.8	7338.0	7230.7
22.5°	6959.5	7040.2	7131.7	7150.0	7070.9
25°	6760.7	6843.8	6957.0	6982.8	6877.1
27.5°	6552.7	6632.5	6759.8	6778.1	6689.1
30°	6329.7	6404.6	6544.4	6575.1	6484.5
32.5°	6103.5	6178.3	6333.1	6358.9	6270.7
35°	5852.2	5943.8	6084.3	6126.8	6027.8
37.5°	5596.0	5685.0	5844.8	5883.0	5776.5
40°	5330.7	5418.8	5576.1	5607.7	5505.4
42.5°	5059.5	5147.6	5315.7	5320.7	5235.8
45°	4782.5	4867.3	5023.7	5027.9	4928.9
47.5°	4501.3	4587.0	4726.7	4710.9	4617.7
50°	4216.8	4298.3	4420.6	4389.0	4305.0
52.5°	3922.3	4001.3	4117.0	4065.4	3986.3
55°	3626.1	3699.4	3795.8	3740.9	3679.4
57.5°	3327.5	3401.5	3475.6	3419.8	3366.6
60°	3026.4	3091.3	3152.0	3095.4	3054.6
62.5°	2720.2	2776.0	2828.4	2774.3	2736.0
65°	2410.8	2459.9	2503.1	2453.2	2412.4
67.5°	2103.0	2144.6	2184.5	2132.9	2090.5
70°	1795.2	1831.0	1867.6	1814.3	1775.2
72.5°	1491.6	1523.2	1555.6	1504.0	1469.9
75°	1196.2	1223.7	1250.3	1204.6	1177.9
77.5°	914.2	937.5	955.8	926.7	900.9
80°	652.2	669.7	680.5	668.8	644.7
82.5°	419.3	431.7	437.6	436.7	420.9
85°	227.9	232.1	242.9	245.4	237.1
87.5°	88.2	94.0	96.5	104.0	95.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)