

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: P489615

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-2HI-30-120-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: P489615  
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-LD4-2HI-30-120-EDD  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

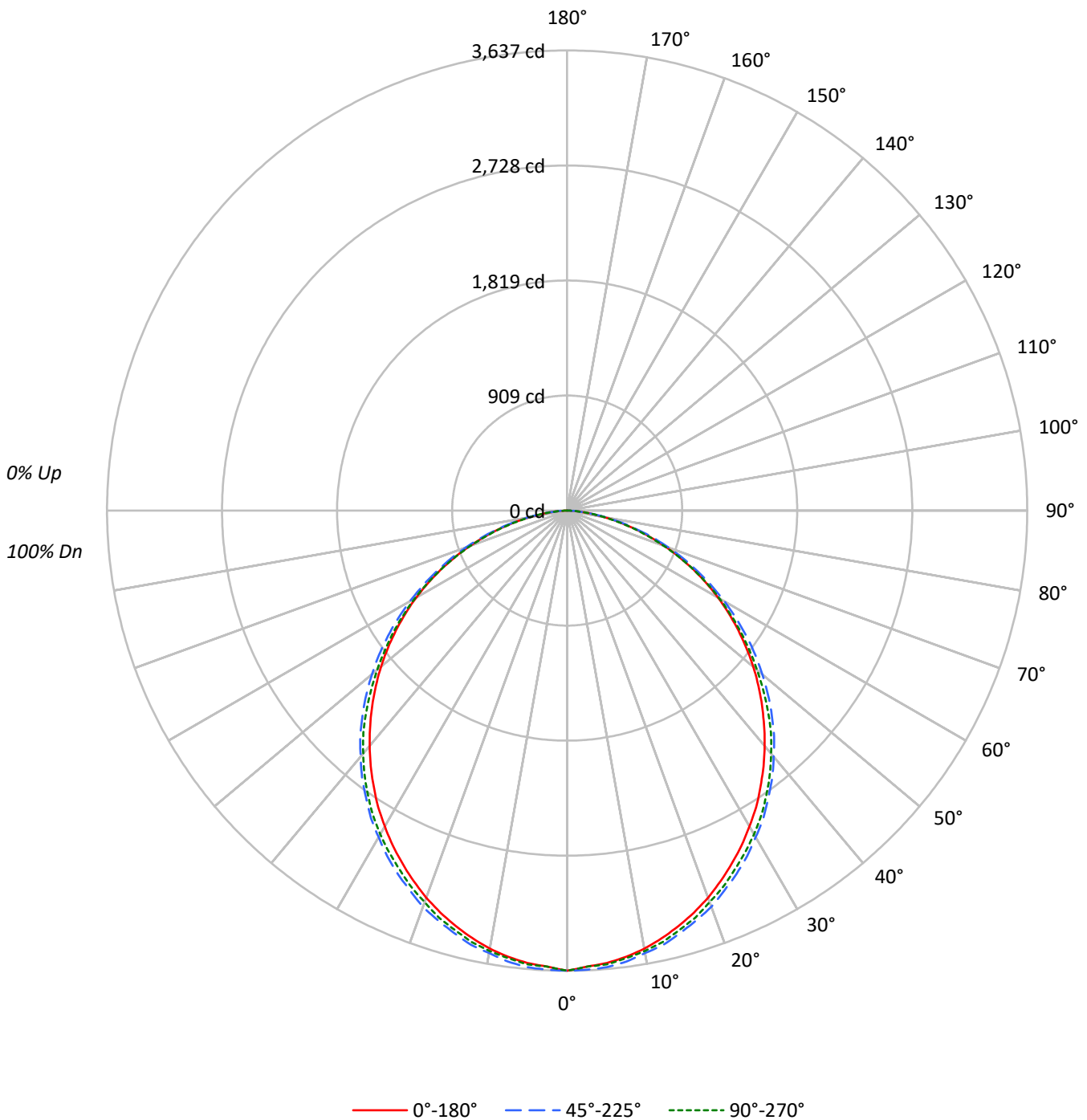
Lumens per Lamp: N/A  
Luminaire Lumens: 9560.7 lumens  
Efficiency: N/A  
Efficacy: 110.7 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	4893	4893	4893
5°	4848	4893	4863
10°	4803	4852	4829
15°	4737	4813	4780
20°	4662	4773	4715
25°	4571	4704	4650
30°	4479	4631	4589
35°	4378	4552	4509
40°	4264	4461	4404
45°	4145	4354	4272
50°	4020	4214	4104
55°	3874	4056	3931
60°	3709	3863	3744
65°	3496	3630	3498
70°	3216	3346	3181
75°	2832	2961	2789
80°	2301	2401	2275
85°	1602	1707	1667



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	342.5	3.6
10°-20°	970.5	10.2
20°-30°	1447.5	15.1
30°-40°	1715.3	17.9
40°-50°	1735.7	18.2
50°-60°	1515.8	15.9
60°-70°	1107.7	11.6
70°-80°	589.4	6.2
80°-90°	136.2	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°	2760.6	28.9
0°-40°	4475.9	46.8
0°-60°	7727.4	80.8
0°-90°	9560.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9560.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3637	3637	3637	3637	3637	
5°	3589	3596	3623	3631	3601	340
15°	3400	3423	3455	3476	3431	959
25°	3079	3117	3169	3180	3132	1419
35°	2666	2707	2771	2790	2745	1667
45°	2178	2217	2288	2290	2245	1680
55°	1652	1685	1729	1704	1676	1476
65°	1098	1120	1140	1117	1099	1087
75°	545	557	570	549	536	579
85°	104	106	111	112	108	131
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3636.6	3636.6	3636.6	3636.6	3636.6
2.5°	3608.1	3619.9	3632.0	3637.3	3607.8
5°	3589.2	3596.0	3622.9	3631.2	3600.6
7.5°	3558.1	3568.4	3594.5	3598.3	3568.7
10°	3515.7	3533.9	3551.3	3570.2	3534.3
12.5°	3461.5	3486.1	3515.7	3519.1	3491.8
15°	3400.5	3423.2	3455.4	3476.3	3431.2
17.5°	3332.3	3354.3	3396.0	3399.7	3372.5
20°	3256.1	3283.4	3333.4	3342.2	3293.3
22.5°	3169.8	3206.5	3248.2	3256.5	3220.5
25°	3079.2	3117.1	3168.6	3180.4	3132.3
27.5°	2984.5	3020.9	3078.8	3087.2	3046.6
30°	2882.9	2917.0	2980.7	2994.7	2953.4
32.5°	2779.9	2814.0	2884.5	2896.2	2856.0
35°	2665.5	2707.1	2771.2	2790.5	2745.4
37.5°	2548.8	2589.3	2662.1	2679.5	2631.0
40°	2427.9	2468.1	2539.7	2554.1	2507.5
42.5°	2304.4	2344.5	2421.1	2423.4	2384.7
45°	2178.2	2216.9	2288.1	2290.0	2244.9
47.5°	2050.2	2089.2	2152.8	2145.6	2103.2
50°	1920.6	1957.7	2013.4	1999.0	1960.7
52.5°	1786.4	1822.4	1875.1	1851.6	1815.6
55°	1651.6	1684.9	1728.9	1703.9	1675.8
57.5°	1515.5	1549.3	1583.0	1557.6	1533.4
60°	1378.4	1407.9	1435.6	1409.8	1391.3
62.5°	1239.0	1264.3	1288.2	1263.6	1246.2
65°	1098.0	1120.4	1140.1	1117.3	1098.8
67.5°	957.8	976.8	995.0	971.5	952.1
70°	817.6	833.9	850.6	826.4	808.5
72.5°	679.3	693.7	708.5	685.0	669.5
75°	544.8	557.3	569.5	548.6	536.5
77.5°	416.4	427.0	435.3	422.1	410.3
80°	297.0	305.0	309.9	304.6	293.6
82.5°	191.0	196.6	199.3	198.9	191.7
85°	103.8	105.7	110.6	111.8	108.0
87.5°	40.2	42.8	44.0	47.4	43.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)