

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: P489662

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-3LO-30-120-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: P489662  
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-LD4-3LO-30-120-EDD-90  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

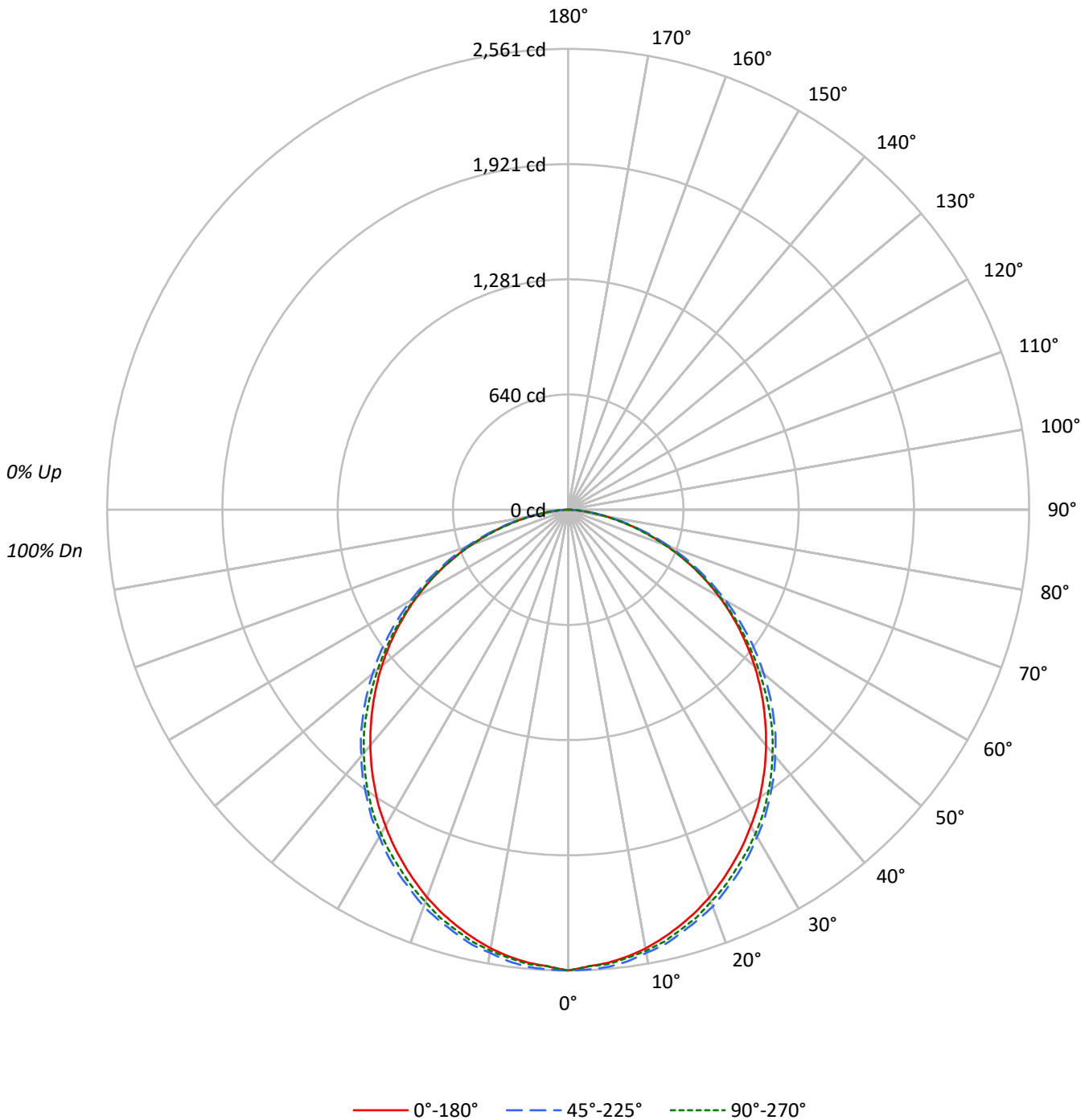
Lumens per Lamp: N/A  
Luminaire Lumens: 6732.2 lumens  
Efficiency: N/A  
Efficacy: 95.9 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 70.2  
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°	3445	3445	3445
5°	3413	3446	3424
10°	3382	3417	3400
15°	3335	3389	3366
20°	3283	3361	3320
25°	3219	3312	3274
30°	3154	3261	3231
35°	3083	3205	3175
40°	3003	3141	3101
45°	2919	3066	3008
50°	2831	2968	2890
55°	2728	2856	2768
60°	2612	2720	2636
65°	2462	2556	2463
70°	2265	2356	2240
75°	1994	2085	1964
80°	1621	1691	1602
85°	1129	1203	1173



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	241.2	3.6
10°-20°	683.4	10.2
20°-30°	1019.3	15.1
30°-40°	1207.9	17.9
40°-50°	1222.2	18.2
50°-60°	1067.4	15.9
60°-70°	780.0	11.6
70°-80°	415.0	6.2
80°-90°	95.9	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°	1943.9	28.9
0°-40°	3151.7	46.8
0°-60°	5441.3	80.8
0°-90°	6732.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6732.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2561	2561	2561	2561	2561	
5°	2527	2532	2551	2557	2535	240
15°	2394	2410	2433	2448	2416	675
25°	2168	2195	2231	2240	2206	999
35°	1877	1906	1951	1965	1933	1174
45°	1534	1561	1611	1612	1581	1183
55°	1163	1186	1217	1200	1180	1040
65°	773	789	803	787	774	765
75°	384	392	401	386	378	408
85°	73	74	78	79	76	93
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2560.7	2560.7	2560.7	2560.7	2560.7
2.5°	2540.7	2549.0	2557.5	2561.2	2540.4
5°	2527.3	2532.1	2551.1	2557.0	2535.3
7.5°	2505.5	2512.7	2531.1	2533.7	2512.9
10°	2475.6	2488.4	2500.7	2514.0	2488.7
12.5°	2437.4	2454.8	2475.6	2478.0	2458.8
15°	2394.5	2410.5	2433.2	2447.8	2416.1
17.5°	2346.5	2361.9	2391.3	2393.9	2374.7
20°	2292.8	2312.0	2347.3	2353.4	2319.0
22.5°	2232.0	2257.9	2287.2	2293.1	2267.7
25°	2168.2	2194.9	2231.2	2239.5	2205.6
27.5°	2101.5	2127.1	2168.0	2173.8	2145.3
30°	2030.0	2054.0	2098.9	2108.7	2079.7
32.5°	1957.5	1981.5	2031.1	2039.4	2011.1
35°	1876.9	1906.2	1951.3	1964.9	1933.2
37.5°	1794.7	1823.3	1874.5	1886.8	1852.6
40°	1709.6	1737.9	1788.3	1798.5	1765.6
42.5°	1622.6	1650.9	1704.8	1706.4	1679.2
45°	1533.8	1561.0	1611.2	1612.5	1580.8
47.5°	1443.6	1471.1	1515.9	1510.9	1481.0
50°	1352.4	1378.5	1417.7	1407.6	1380.7
52.5°	1257.9	1283.3	1320.4	1303.8	1278.5
55°	1163.0	1186.4	1217.4	1199.8	1180.0
57.5°	1067.2	1090.9	1114.7	1096.8	1079.7
60°	970.6	991.4	1010.9	992.7	979.7
62.5°	872.4	890.3	907.1	889.8	877.5
65°	773.2	788.9	802.8	786.8	773.7
67.5°	674.5	687.8	700.6	684.1	670.5
70°	575.7	587.2	599.0	581.9	569.3
72.5°	478.4	488.5	498.9	482.4	471.4
75°	383.6	392.5	401.0	386.3	377.8
77.5°	293.2	300.7	306.5	297.2	288.9
80°	209.2	214.8	218.2	214.5	206.8
82.5°	134.5	138.5	140.3	140.1	135.0
85°	73.1	74.4	77.9	78.7	76.0
87.5°	28.3	30.1	30.9	33.3	30.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)