

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: P489747

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-5STD-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: P489747  
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-LD4-5STD-30-120-EDD  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

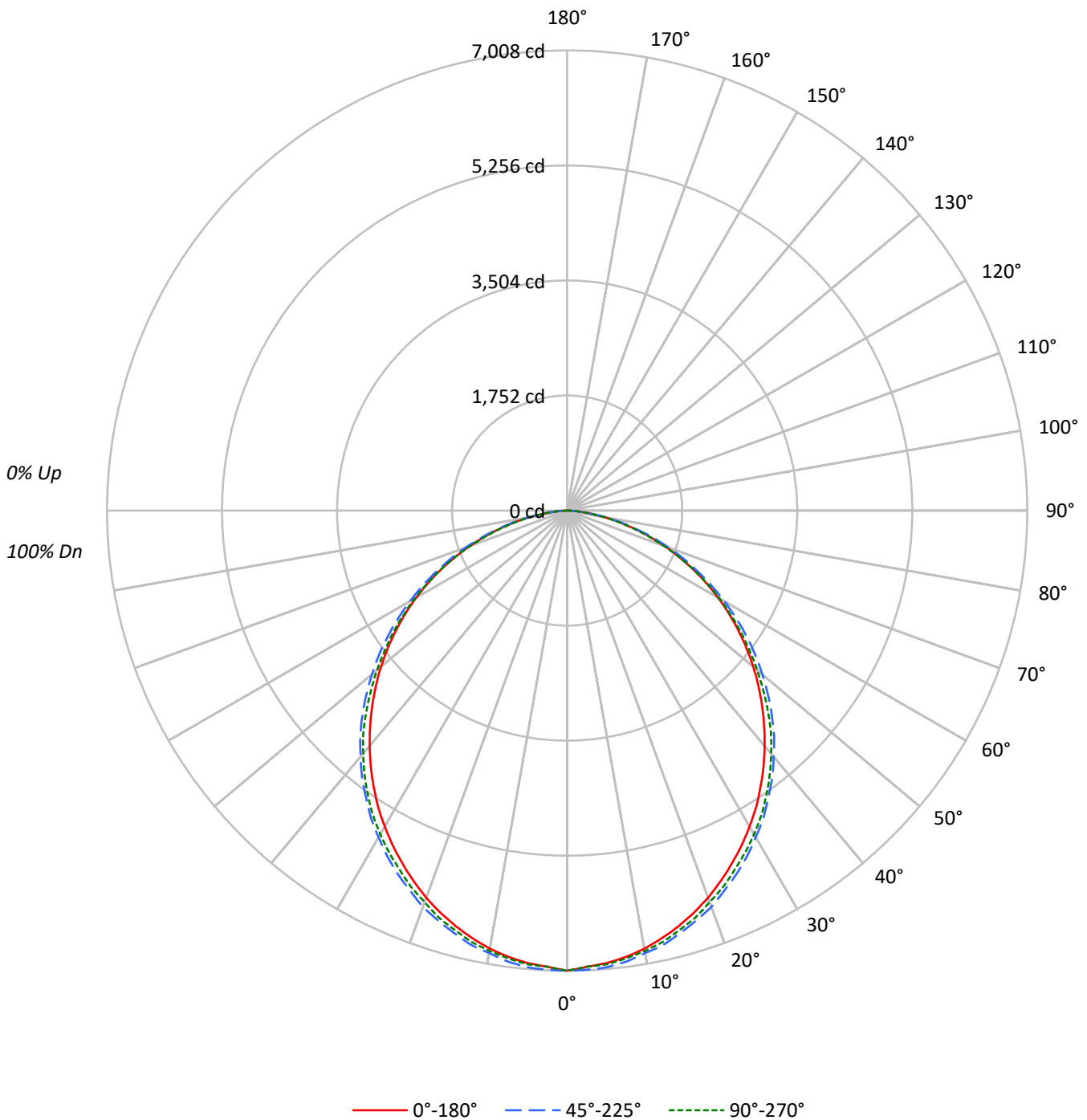
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18424.2 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): 166.5  
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	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°	9429	9429	9429
5°	9342	9430	9371
10°	9256	9350	9305
15°	9128	9276	9210
20°	8985	9198	9087
25°	8809	9065	8961
30°	8632	8924	8843
35°	8437	8772	8690
40°	8218	8596	8487
45°	7987	8390	8232
50°	7747	8122	7909
55°	7466	7815	7575
60°	7148	7445	7215
65°	6737	6995	6741
70°	6198	6449	6129
75°	5458	5705	5375
80°	4435	4628	4385
85°	3089	3291	3213



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	660.0	3.6
10°-20°	1870.3	10.2
20°-30°	2789.5	15.1
30°-40°	3305.6	17.9
40°-50°	3344.7	18.2
50°-60°	2921.1	15.9
60°-70°	2134.6	11.6
70°-80°	1135.8	6.2
80°-90°	262.5	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°	5319.8	28.9
0°-40°	8625.4	46.8
0°-60°	14891.2	80.8
0°-90°	18424.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18424.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	7008	7008	7008	7008	7008	
5°	6917	6930	6982	6998	6938	656
15°	6553	6597	6659	6699	6612	1847
25°	5934	6007	6106	6129	6036	2734
35°	5137	5217	5340	5378	5291	3212
45°	4198	4272	4409	4413	4326	3238
55°	3183	3247	3332	3284	3229	2845
65°	2116	2159	2197	2153	2117	2094
75°	1050	1074	1097	1057	1034	1116
85°	200	204	213	215	208	253
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	7007.9	7007.9	7007.9	7007.9	7007.9
2.5°	6953.1	6975.8	6999.1	7009.4	6952.4
5°	6916.6	6929.8	6981.6	6997.7	6938.5
7.5°	6856.8	6876.5	6926.9	6934.2	6877.2
10°	6775.0	6810.0	6843.6	6880.1	6810.8
12.5°	6670.6	6718.0	6775.0	6781.6	6729.0
15°	6553.0	6596.8	6658.9	6699.1	6612.2
17.5°	6421.6	6464.0	6544.3	6551.6	6499.0
20°	6274.8	6327.4	6423.8	6440.6	6346.4
22.5°	6108.4	6179.2	6259.5	6275.6	6206.2
25°	5933.9	6006.9	6106.2	6128.8	6036.1
27.5°	5751.3	5821.4	5933.1	5949.2	5871.1
30°	5555.7	5621.4	5744.0	5771.0	5691.5
32.5°	5357.1	5422.8	5558.6	5581.2	5503.8
35°	5136.6	5216.9	5340.3	5377.5	5290.6
37.5°	4911.7	4989.8	5130.0	5163.6	5070.1
40°	4678.8	4756.1	4894.1	4921.9	4832.1
42.5°	4440.7	4518.1	4665.6	4670.0	4595.5
45°	4197.6	4272.1	4409.3	4413.0	4326.1
47.5°	3950.8	4026.0	4148.7	4134.8	4053.0
50°	3701.1	3772.6	3880.0	3852.2	3778.5
52.5°	3442.6	3512.0	3613.5	3568.2	3498.8
55°	3182.7	3246.9	3331.6	3283.5	3229.4
57.5°	2920.6	2985.6	3050.5	3001.6	2954.9
60°	2656.3	2713.2	2766.5	2716.9	2681.1
62.5°	2387.6	2436.5	2482.5	2435.0	2401.4
65°	2116.0	2159.0	2197.0	2153.2	2117.4
67.5°	1845.8	1882.3	1917.4	1872.1	1834.8
70°	1575.6	1607.0	1639.2	1592.4	1558.1
72.5°	1309.1	1336.9	1365.4	1320.1	1290.2
75°	1049.9	1074.0	1097.4	1057.2	1033.9
77.5°	802.4	822.9	838.9	813.4	790.7
80°	572.4	587.8	597.3	587.0	565.9
82.5°	368.0	378.9	384.1	383.3	369.5
85°	200.1	203.7	213.2	215.4	208.1
87.5°	77.4	82.5	84.7	91.3	84.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)