

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: P489207

Luminaire Tested: **CLM-24-2-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: P489207  
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-LD4-5STD-30-120-EDD  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

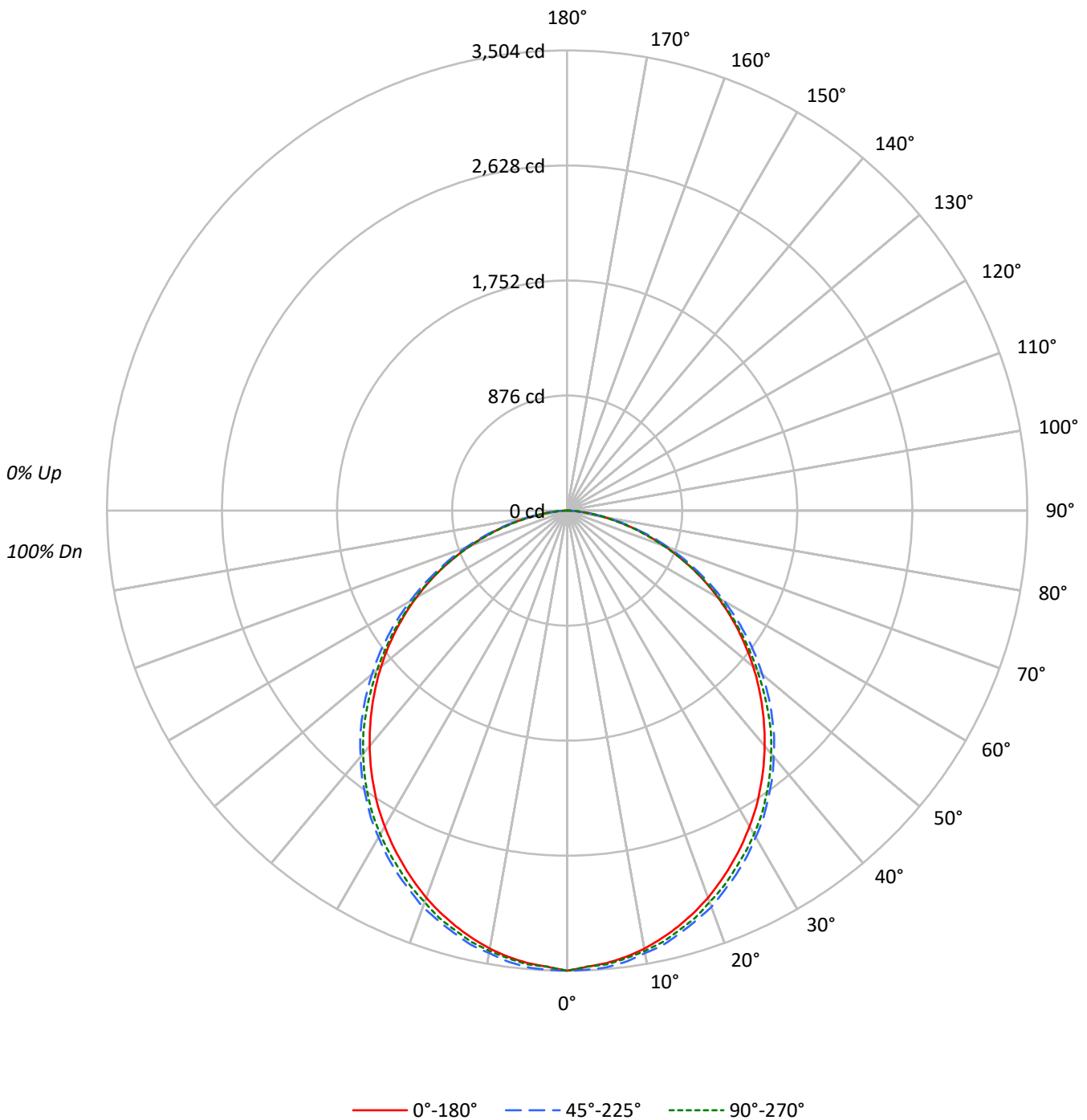
Lumens per Lamp: N/A  
Luminaire Lumens: 9211.7 lumens  
Efficiency: N/A  
Efficacy: 110.7 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 83.2  
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	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°	9429	9429	9429
5°	9341	9429	9371
10°	9256	9350	9305
15°	9128	9275	9210
20°	8984	9198	9087
25°	8809	9065	8961
30°	8631	8924	8842
35°	8437	8771	8690
40°	8218	8596	8487
45°	7987	8390	8232
50°	7747	8121	7909
55°	7466	7815	7575
60°	7148	7444	7215
65°	6736	6995	6741
70°	6198	6448	6129
75°	5457	5705	5374
80°	4435	4627	4384
85°	3088	3291	3211



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	330.0	3.6
10°-20°	935.1	10.2
20°-30°	1394.7	15.1
30°-40°	1652.7	17.9
40°-50°	1672.3	18.2
50°-60°	1460.5	15.9
60°-70°	1067.3	11.6
70°-80°	567.9	6.2
80°-90°	131.3	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°	2659.8	28.9
0°-40°	4312.5	46.8
0°-60°	7445.3	80.8
0°-90°	9211.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9211.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3504	3504	3504	3504	3504	
5°	3458	3465	3491	3499	3469	328
15°	3276	3298	3329	3349	3306	924
25°	2967	3003	3053	3064	3018	1367
35°	2568	2608	2670	2689	2645	1606
45°	2099	2136	2205	2206	2163	1619
55°	1591	1623	1666	1642	1615	1422
65°	1058	1080	1098	1076	1059	1047
75°	525	537	549	529	517	558
85°	100	102	107	108	104	127
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3503.8	3503.8	3503.8	3503.8	3503.8
2.5°	3476.4	3487.7	3499.4	3504.5	3476.1
5°	3458.2	3464.7	3490.7	3498.7	3469.1
7.5°	3428.2	3438.1	3463.3	3466.9	3438.5
10°	3387.4	3404.9	3421.7	3439.9	3405.2
12.5°	3335.1	3358.9	3387.4	3390.6	3364.4
15°	3276.4	3298.3	3329.3	3349.4	3305.9
17.5°	3210.7	3231.8	3272.0	3275.6	3249.4
20°	3137.3	3163.6	3211.8	3220.2	3173.1
22.5°	3054.1	3089.5	3129.6	3137.7	3103.0
25°	2966.8	3003.3	3053.0	3064.3	3017.9
27.5°	2875.5	2910.6	2966.4	2974.5	2935.4
30°	2777.7	2810.6	2871.9	2885.4	2845.6
32.5°	2678.4	2711.3	2779.2	2790.5	2751.8
35°	2568.2	2608.3	2670.0	2688.6	2645.2
37.5°	2455.7	2494.8	2564.9	2581.7	2534.9
40°	2339.3	2378.0	2447.0	2460.8	2415.9
42.5°	2220.3	2259.0	2332.7	2334.9	2297.7
45°	2098.7	2135.9	2204.6	2206.4	2163.0
47.5°	1975.3	2012.9	2074.2	2067.3	2026.4
50°	1850.5	1886.2	1939.9	1926.0	1889.2
52.5°	1721.2	1755.9	1806.7	1784.0	1749.3
55°	1591.3	1623.4	1665.7	1641.7	1614.6
57.5°	1460.2	1492.7	1525.2	1500.7	1477.4
60°	1328.1	1356.5	1383.2	1358.4	1340.5
62.5°	1193.7	1218.2	1241.2	1217.5	1200.7
65°	1057.9	1079.5	1098.5	1076.5	1058.7
67.5°	922.9	941.1	958.6	936.0	917.4
70°	787.8	803.5	819.5	796.2	779.0
72.5°	654.5	668.4	682.7	660.0	645.1
75°	524.9	537.0	548.7	528.6	516.9
77.5°	401.2	411.4	419.4	406.7	395.4
80°	286.2	293.9	298.6	293.5	282.9
82.5°	184.0	189.5	192.0	191.7	184.7
85°	100.0	101.9	106.6	107.7	104.0
87.5°	38.7	41.3	42.3	45.6	42.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)