

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: P489089

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-2LO-35-120-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: P489089  
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-LD4-2LO-35-120-EDD  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

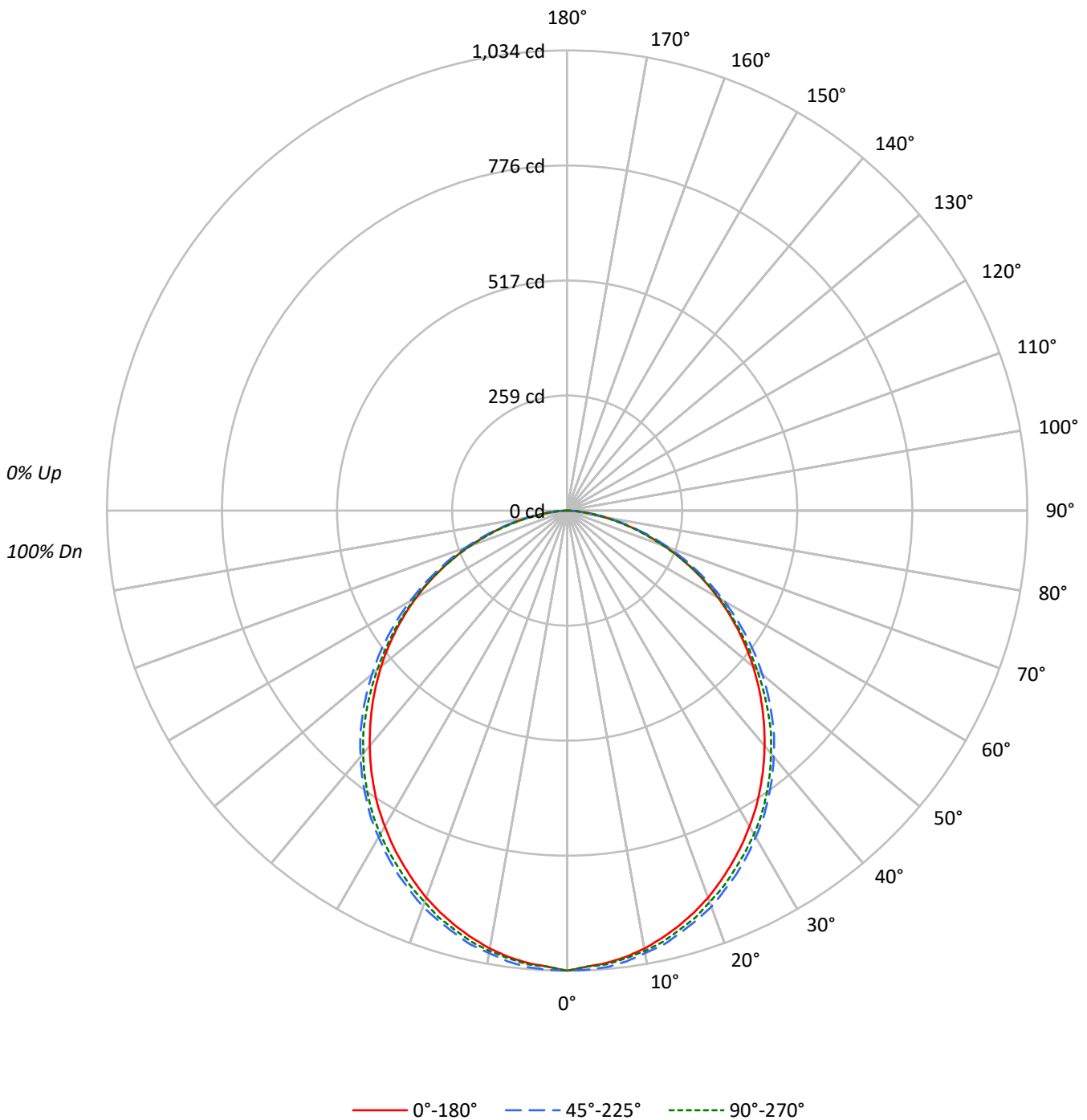
Lumens per Lamp: N/A  
Luminaire Lumens: 2717.6 lumens  
Efficiency: N/A  
Efficacy: 116.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
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	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°	2782	2782	2782
5°	2756	2782	2764
10°	2731	2758	2745
15°	2693	2736	2717
20°	2651	2713	2681
25°	2599	2674	2643
30°	2546	2633	2609
35°	2489	2588	2564
40°	2424	2536	2504
45°	2356	2475	2428
50°	2285	2396	2333
55°	2203	2305	2235
60°	2109	2196	2129
65°	1987	2064	1989
70°	1828	1902	1808
75°	1611	1683	1586
80°	1308	1365	1294
85°	911	969	948



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	97.4	3.6
10°-20°	275.9	10.2
20°-30°	411.5	15.1
30°-40°	487.6	17.9
40°-50°	493.3	18.2
50°-60°	430.9	15.9
60°-70°	314.9	11.6
70°-80°	167.5	6.2
80°-90°	38.7	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°	784.7	28.9
0°-40°	1272.3	46.8
0°-60°	2196.5	80.8
0°-90°	2717.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2717.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1034	1034	1034	1034	1034	
5°	1020	1022	1030	1032	1023	97
15°	967	973	982	988	975	272
25°	875	886	901	904	890	403
35°	758	770	788	793	780	474
45°	619	630	650	651	638	478
55°	470	479	491	484	476	420
65°	312	318	324	318	312	309
75°	155	158	162	156	152	165
85°	30	30	31	32	31	37
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1033.7	1033.7	1033.7	1033.7	1033.7
2.5°	1025.6	1028.9	1032.4	1033.9	1025.5
5°	1020.2	1022.2	1029.8	1032.2	1023.4
7.5°	1011.4	1014.3	1021.7	1022.8	1014.4
10°	999.3	1004.5	1009.4	1014.8	1004.6
12.5°	983.9	990.9	999.3	1000.3	992.5
15°	966.6	973.0	982.2	988.1	975.3
17.5°	947.2	953.4	965.3	966.4	958.6
20°	925.6	933.3	947.5	950.0	936.1
22.5°	901.0	911.4	923.3	925.7	915.4
25°	875.3	886.0	900.7	904.0	890.3
27.5°	848.3	858.7	875.1	877.5	866.0
30°	819.5	829.2	847.3	851.2	839.5
32.5°	790.2	799.9	819.9	823.2	811.8
35°	757.7	769.5	787.7	793.2	780.4
37.5°	724.5	736.0	756.7	761.6	747.8
40°	690.1	701.5	721.9	726.0	712.7
42.5°	655.0	666.4	688.2	688.8	677.8
45°	619.2	630.1	650.4	650.9	638.1
47.5°	582.7	593.8	611.9	609.9	597.8
50°	545.9	556.5	572.3	568.2	557.3
52.5°	507.8	518.0	533.0	526.3	516.1
55°	469.5	478.9	491.4	484.3	476.3
57.5°	430.8	440.4	450.0	442.7	435.9
60°	391.8	400.2	408.1	400.7	395.5
62.5°	352.2	359.4	366.2	359.2	354.2
65°	312.1	318.5	324.1	317.6	312.3
67.5°	272.3	277.6	282.8	276.1	270.6
70°	232.4	237.0	241.8	234.9	229.8
72.5°	193.1	197.2	201.4	194.7	190.3
75°	154.9	158.4	161.9	155.9	152.5
77.5°	118.4	121.4	123.7	120.0	116.6
80°	84.4	86.7	88.1	86.6	83.5
82.5°	54.3	55.9	56.6	56.5	54.5
85°	29.5	30.0	31.4	31.8	30.7
87.5°	11.4	12.2	12.5	13.5	12.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)