

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: P489040

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-1HI-35-120-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: P489040  
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-LD4-1HI-35-120-EDD-90  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

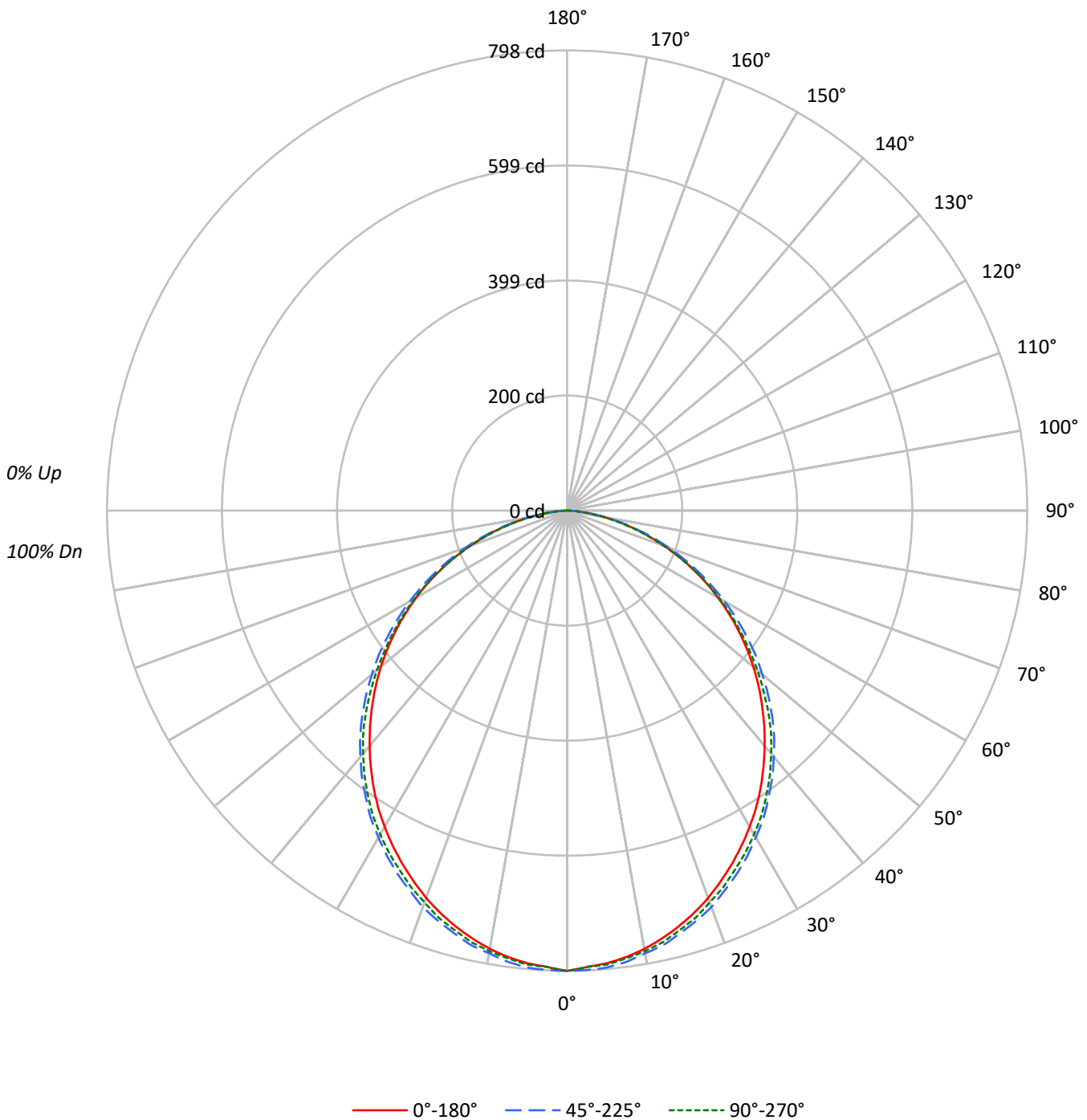
Lumens per Lamp: N/A  
Luminaire Lumens: 2099.0 lumens  
Efficiency: N/A  
Efficacy: 97.2 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 21.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	2148	2148	2148
5°	2129	2149	2135
10°	2109	2131	2120
15°	2080	2113	2099
20°	2047	2096	2070
25°	2007	2066	2042
30°	1967	2033	2015
35°	1922	1999	1980
40°	1872	1959	1934
45°	1820	1912	1876
50°	1765	1850	1802
55°	1701	1781	1726
60°	1629	1696	1644
65°	1535	1594	1536
70°	1412	1469	1397
75°	1243	1300	1225
80°	1010	1054	1000
85°	704	750	732



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.2	3.6
10°-20°	213.1	10.2
20°-30°	317.8	15.1
30°-40°	376.6	17.9
40°-50°	381.1	18.2
50°-60°	332.8	15.9
60°-70°	243.2	11.6
70°-80°	129.4	6.2
80°-90°	29.9	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°	606.1	28.9
0°-40°	982.7	46.8
0°-60°	1696.5	80.8
0°-90°	2099.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2099.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	798	798	798	798	798	
5°	788	790	795	797	790	75
15°	747	752	759	763	753	210
25°	676	684	696	698	688	311
35°	585	594	608	613	603	366
45°	478	487	502	503	493	369
55°	363	370	380	374	368	324
65°	241	246	250	245	241	239
75°	120	122	125	120	118	127
85°	23	23	24	24	24	29
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	798.4	798.4	798.4	798.4	798.4
2.5°	792.1	794.7	797.4	798.6	792.1
5°	788.0	789.5	795.4	797.2	790.5
7.5°	781.2	783.4	789.2	790.0	783.5
10°	771.8	775.8	779.7	783.8	775.9
12.5°	760.0	765.4	771.8	772.6	766.6
15°	746.6	751.6	758.6	763.2	753.3
17.5°	731.6	736.4	745.6	746.4	740.4
20°	714.9	720.9	731.8	733.8	723.0
22.5°	695.9	704.0	713.1	715.0	707.1
25°	676.0	684.3	695.7	698.2	687.7
27.5°	655.2	663.2	675.9	677.8	668.9
30°	632.9	640.4	654.4	657.5	648.4
32.5°	610.3	617.8	633.3	635.8	627.0
35°	585.2	594.3	608.4	612.6	602.7
37.5°	559.6	568.5	584.4	588.3	577.6
40°	533.0	541.9	557.6	560.7	550.5
42.5°	505.9	514.7	531.5	532.0	523.6
45°	478.2	486.7	502.3	502.8	492.9
47.5°	450.1	458.7	472.6	471.1	461.7
50°	421.7	429.8	442.0	438.9	430.5
52.5°	392.2	400.1	411.7	406.5	398.6
55°	362.6	369.9	379.6	374.1	367.9
57.5°	332.7	340.1	347.5	342.0	336.6
60°	302.6	309.1	315.2	309.5	305.4
62.5°	272.0	277.6	282.8	277.4	273.6
65°	241.1	246.0	250.3	245.3	241.2
67.5°	210.3	214.4	218.4	213.3	209.0
70°	179.5	183.1	186.7	181.4	177.5
72.5°	149.1	152.3	155.6	150.4	147.0
75°	119.6	122.4	125.0	120.4	117.8
77.5°	91.4	93.7	95.6	92.7	90.1
80°	65.2	67.0	68.0	66.9	64.5
82.5°	41.9	43.2	43.8	43.7	42.1
85°	22.8	23.2	24.3	24.5	23.7
87.5°	8.8	9.4	9.6	10.4	9.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)