

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: P489108

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-3HI-27-120-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: P489108  
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-LD4-3HI-27-120-EDD-90  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

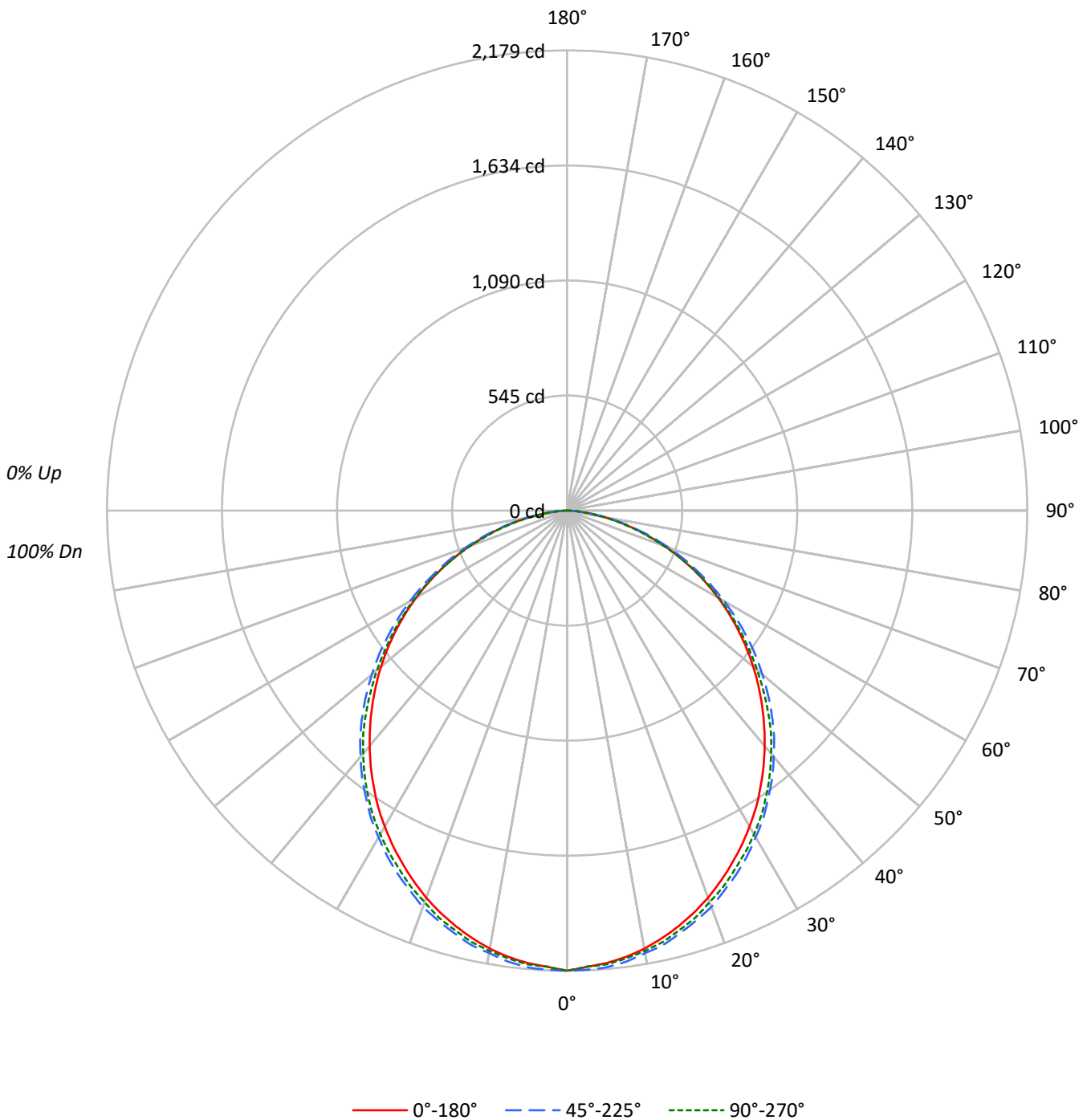
Lumens per Lamp: N/A  
Luminaire Lumens: 5728.7 lumens  
Efficiency: N/A  
Efficacy: 88.4 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 64.8  
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	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°	5864	5864	5864
5°	5809	5864	5828
10°	5756	5814	5787
15°	5677	5768	5728
20°	5587	5720	5651
25°	5478	5637	5573
30°	5368	5550	5499
35°	5247	5455	5404
40°	5110	5346	5278
45°	4967	5218	5119
50°	4818	5050	4919
55°	4643	4860	4711
60°	4445	4630	4486
65°	4189	4350	4192
70°	3854	4010	3812
75°	3395	3548	3343
80°	2758	2878	2726
85°	1920	2047	1998



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	205.2	3.6
10°-20°	581.5	10.2
20°-30°	867.3	15.1
30°-40°	1027.8	17.9
40°-50°	1040.0	18.2
50°-60°	908.3	15.9
60°-70°	663.7	11.6
70°-80°	353.2	6.2
80°-90°	81.6	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°	1654.1	28.9
0°-40°	2681.9	46.8
0°-60°	4630.2	80.8
0°-90°	5728.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5728.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2179	2179	2179	2179	2179	
5°	2151	2155	2171	2176	2157	204
15°	2038	2051	2070	2083	2056	574
25°	1845	1868	1899	1906	1877	850
35°	1597	1622	1660	1672	1645	999
45°	1305	1328	1371	1372	1345	1007
55°	990	1010	1036	1021	1004	885
65°	658	671	683	670	658	651
75°	326	334	341	329	322	347
85°	62	63	66	67	65	79
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2179.0	2179.0	2179.0	2179.0	2179.0
2.5°	2162.0	2169.0	2176.3	2179.4	2161.7
5°	2150.6	2154.7	2170.8	2175.8	2157.4
7.5°	2132.0	2138.1	2153.8	2156.1	2138.4
10°	2106.6	2117.5	2127.9	2139.3	2117.7
12.5°	2074.1	2088.9	2106.6	2108.6	2092.3
15°	2037.6	2051.2	2070.5	2083.0	2055.9
17.5°	1996.7	2009.9	2034.8	2037.1	2020.8
20°	1951.1	1967.4	1997.4	2002.6	1973.3
22.5°	1899.3	1921.3	1946.3	1951.3	1929.7
25°	1845.0	1867.7	1898.6	1905.7	1876.8
27.5°	1788.3	1810.1	1844.8	1849.8	1825.5
30°	1727.4	1747.9	1786.0	1794.4	1769.7
32.5°	1665.7	1686.1	1728.3	1735.4	1711.3
35°	1597.1	1622.1	1660.5	1672.0	1645.0
37.5°	1527.2	1551.5	1595.1	1605.5	1576.5
40°	1454.8	1478.8	1521.8	1530.4	1502.5
42.5°	1380.8	1404.8	1450.7	1452.1	1428.9
45°	1305.2	1328.3	1371.0	1372.1	1345.1
47.5°	1228.4	1251.8	1290.0	1285.6	1260.2
50°	1150.8	1173.0	1206.4	1197.8	1174.9
52.5°	1070.4	1092.0	1123.6	1109.5	1087.9
55°	989.6	1009.6	1035.9	1020.9	1004.1
57.5°	908.1	928.3	948.5	933.3	918.8
60°	825.9	843.6	860.2	844.8	833.6
62.5°	742.4	757.6	771.9	757.1	746.7
65°	657.9	671.3	683.1	669.5	658.4
67.5°	573.9	585.3	596.2	582.1	570.5
70°	489.9	499.7	509.7	495.1	484.5
72.5°	407.1	415.7	424.5	410.5	401.2
75°	326.5	334.0	341.2	328.7	321.5
77.5°	249.5	255.9	260.9	252.9	245.9
80°	178.0	182.8	185.7	182.5	175.9
82.5°	114.4	117.8	119.4	119.2	114.9
85°	62.2	63.3	66.3	67.0	64.7
87.5°	24.1	25.7	26.3	28.4	26.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)