

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: P489610

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-2HI-20-120-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: P489610
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-LD4-2HI-20-120-EDD-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

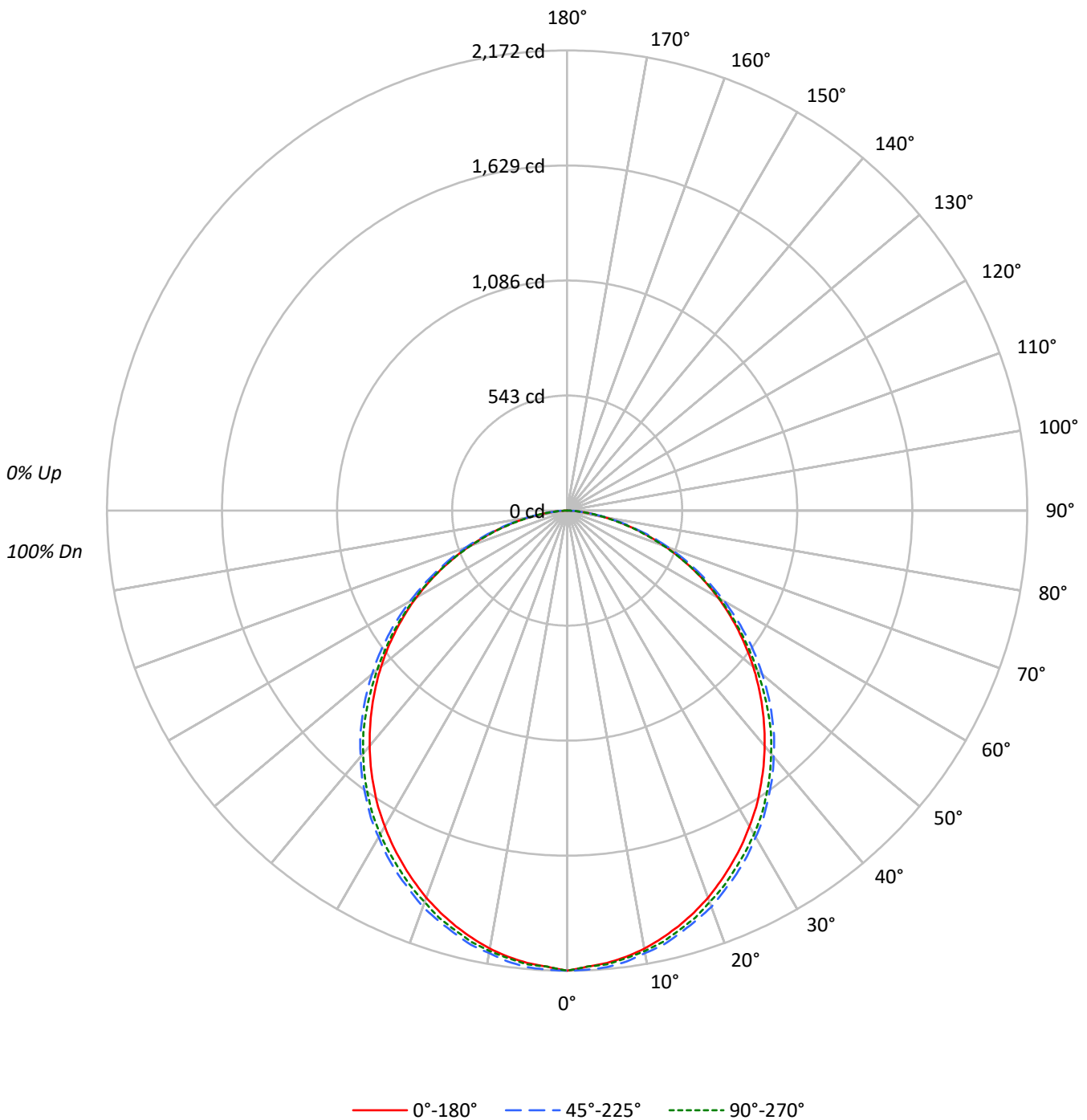
Lumens per Lamp: N/A
Luminaire Lumens: 5709.6 lumens
Efficiency: N/A
Efficacy: 66.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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°	2922	2922	2922
5°	2895	2922	2904
10°	2868	2898	2884
15°	2829	2874	2854
20°	2784	2850	2816
25°	2730	2809	2777
30°	2675	2766	2740
35°	2615	2718	2693
40°	2547	2664	2630
45°	2475	2600	2551
50°	2401	2517	2451
55°	2314	2422	2348
60°	2215	2307	2236
65°	2088	2167	2089
70°	1921	1998	1900
75°	1692	1768	1666
80°	1375	1434	1359
85°	957	1020	996



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	204.5	3.6
10°-20°	579.6	10.2
20°-30°	864.5	15.1
30°-40°	1024.4	17.9
40°-50°	1036.5	18.2
50°-60°	905.3	15.9
60°-70°	661.5	11.6
70°-80°	352.0	6.2
80°-90°	81.3	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°	1648.6	28.9
0°-40°	2673.0	46.8
0°-60°	4614.8	80.8
0°-90°	5709.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5709.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2172	2172	2172	2172	2172	
5°	2143	2148	2164	2169	2150	203
15°	2031	2044	2064	2076	2049	573
25°	1839	1862	1892	1899	1871	847
35°	1592	1617	1655	1666	1640	995
45°	1301	1324	1366	1368	1341	1004
55°	986	1006	1032	1018	1001	882
65°	656	669	681	667	656	649
75°	325	333	340	328	320	346
85°	62	63	66	67	64	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2171.7	2171.7	2171.7	2171.7	2171.7
2.5°	2154.8	2161.8	2169.0	2172.2	2154.5
5°	2143.4	2147.5	2163.6	2168.6	2150.2
7.5°	2124.9	2131.0	2146.6	2148.9	2131.2
10°	2099.5	2110.4	2120.8	2132.1	2110.6
12.5°	2067.2	2081.9	2099.5	2101.6	2085.3
15°	2030.8	2044.3	2063.6	2076.0	2049.1
17.5°	1990.0	2003.2	2028.0	2030.3	2014.0
20°	1944.6	1960.8	1990.7	1995.9	1966.7
22.5°	1893.0	1914.9	1939.8	1944.8	1923.3
25°	1838.9	1861.5	1892.3	1899.3	1870.6
27.5°	1782.3	1804.0	1838.7	1843.6	1819.4
30°	1721.7	1742.0	1780.1	1788.4	1763.8
32.5°	1660.1	1680.5	1722.6	1729.6	1705.6
35°	1591.8	1616.7	1654.9	1666.5	1639.5
37.5°	1522.1	1546.3	1589.8	1600.2	1571.2
40°	1449.9	1473.9	1516.7	1525.3	1497.4
42.5°	1376.2	1400.2	1445.9	1447.2	1424.1
45°	1300.8	1323.9	1366.4	1367.6	1340.6
47.5°	1224.3	1247.6	1285.7	1281.4	1256.0
50°	1147.0	1169.1	1202.4	1193.8	1170.9
52.5°	1066.9	1088.4	1119.8	1105.8	1084.3
55°	986.3	1006.2	1032.5	1017.5	1000.8
57.5°	905.1	925.2	945.4	930.2	915.7
60°	823.2	840.8	857.3	841.9	830.9
62.5°	739.9	755.1	769.3	754.6	744.2
65°	655.7	669.1	680.8	667.3	656.2
67.5°	572.0	583.3	594.2	580.2	568.6
70°	488.3	498.0	508.0	493.5	482.9
72.5°	405.7	414.3	423.1	409.1	399.8
75°	325.4	332.8	340.1	327.6	320.4
77.5°	248.7	255.0	260.0	252.1	245.0
80°	177.4	182.1	185.1	181.9	175.4
82.5°	114.0	117.4	119.0	118.8	114.5
85°	62.0	63.1	66.1	66.7	64.5
87.5°	24.0	25.6	26.2	28.3	26.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)