

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: P489630

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-2LO-40-120-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: P489630
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-LD4-2LO-40-120-EDD-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

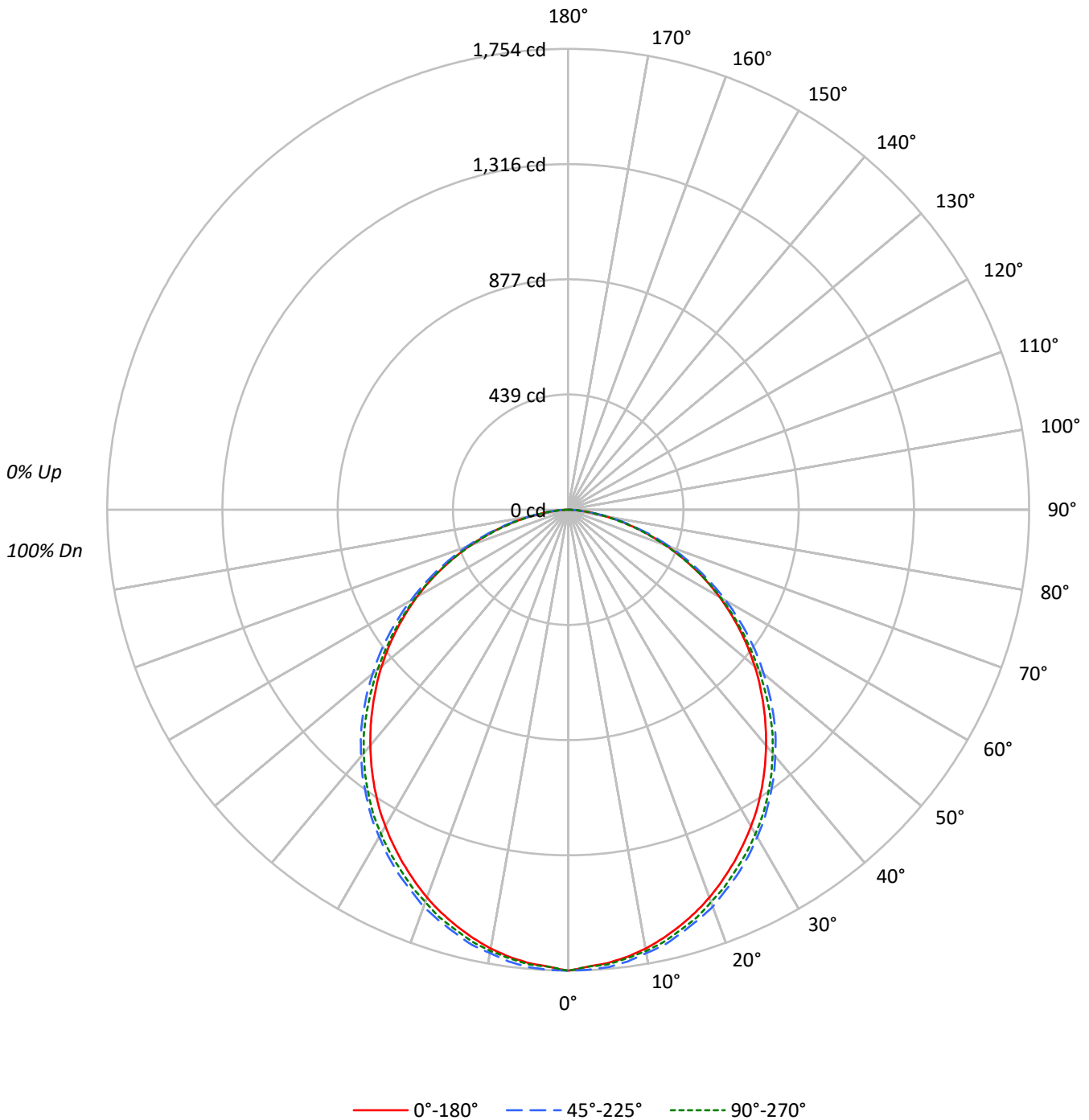
Lumens per Lamp: N/A
Luminaire Lumens: 4612.7 lumens
Efficiency: N/A
Efficacy: 98.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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	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°	2361	2361	2361
5°	2339	2361	2346
10°	2317	2341	2330
15°	2285	2322	2306
20°	2249	2303	2275
25°	2205	2269	2244
30°	2161	2234	2214
35°	2112	2196	2176
40°	2057	2152	2125
45°	2000	2101	2061
50°	1940	2033	1980
55°	1869	1957	1897
60°	1790	1864	1806
65°	1687	1751	1688
70°	1552	1614	1535
75°	1367	1428	1345
80°	1110	1158	1098
85°	773	824	804



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	165.2	3.6
10°-20°	468.3	10.2
20°-30°	698.4	15.1
30°-40°	827.6	17.9
40°-50°	837.4	18.2
50°-60°	731.3	15.9
60°-70°	534.4	11.6
70°-80°	284.4	6.2
80°-90°	65.7	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°	1331.9	28.9
0°-40°	2159.5	46.8
0°-60°	3728.2	80.8
0°-90°	4612.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4612.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1754	1754	1754	1754	1754	
5°	1732	1735	1748	1752	1737	164
15°	1641	1652	1667	1677	1655	463
25°	1486	1504	1529	1534	1511	684
35°	1286	1306	1337	1346	1325	804
45°	1051	1070	1104	1105	1083	811
55°	797	813	834	822	808	712
65°	530	540	550	539	530	524
75°	263	269	275	265	259	280
85°	50	51	53	54	52	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1754.5	1754.5	1754.5	1754.5	1754.5
2.5°	1740.8	1746.5	1752.3	1754.9	1740.6
5°	1731.7	1734.9	1747.9	1751.9	1737.1
7.5°	1716.7	1721.6	1734.2	1736.0	1721.8
10°	1696.2	1705.0	1713.4	1722.5	1705.2
12.5°	1670.1	1681.9	1696.2	1697.8	1684.7
15°	1640.6	1651.6	1667.1	1677.2	1655.4
17.5°	1607.7	1618.3	1638.4	1640.3	1627.1
20°	1571.0	1584.1	1608.3	1612.5	1588.9
22.5°	1529.3	1547.0	1567.1	1571.2	1553.8
25°	1485.6	1503.9	1528.7	1534.4	1511.2
27.5°	1439.9	1457.5	1485.4	1489.4	1469.9
30°	1390.9	1407.4	1438.1	1444.8	1424.9
32.5°	1341.2	1357.6	1391.7	1397.3	1377.9
35°	1286.0	1306.1	1337.0	1346.3	1324.6
37.5°	1229.7	1249.2	1284.3	1292.8	1269.4
40°	1171.4	1190.8	1225.3	1232.2	1209.8
42.5°	1111.8	1131.2	1168.1	1169.2	1150.5
45°	1050.9	1069.6	1103.9	1104.8	1083.1
47.5°	989.1	1008.0	1038.7	1035.2	1014.7
50°	926.6	944.5	971.4	964.4	946.0
52.5°	861.9	879.3	904.7	893.3	876.0
55°	796.8	812.9	834.1	822.0	808.5
57.5°	731.2	747.5	763.7	751.5	739.8
60°	665.0	679.3	692.6	680.2	671.2
62.5°	597.8	610.0	621.5	609.6	601.2
65°	529.8	540.5	550.0	539.1	530.1
67.5°	462.1	471.3	480.0	468.7	459.4
70°	394.5	402.3	410.4	398.7	390.1
72.5°	327.8	334.7	341.8	330.5	323.0
75°	262.9	268.9	274.7	264.7	258.8
77.5°	200.9	206.0	210.0	203.6	198.0
80°	143.3	147.2	149.5	147.0	141.7
82.5°	92.1	94.9	96.2	96.0	92.5
85°	50.1	51.0	53.4	53.9	52.1
87.5°	19.4	20.7	21.2	22.8	21.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)