

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: P489634

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-2STD-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: P489634  
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-LD4-2STD-20-120-EDD-90  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

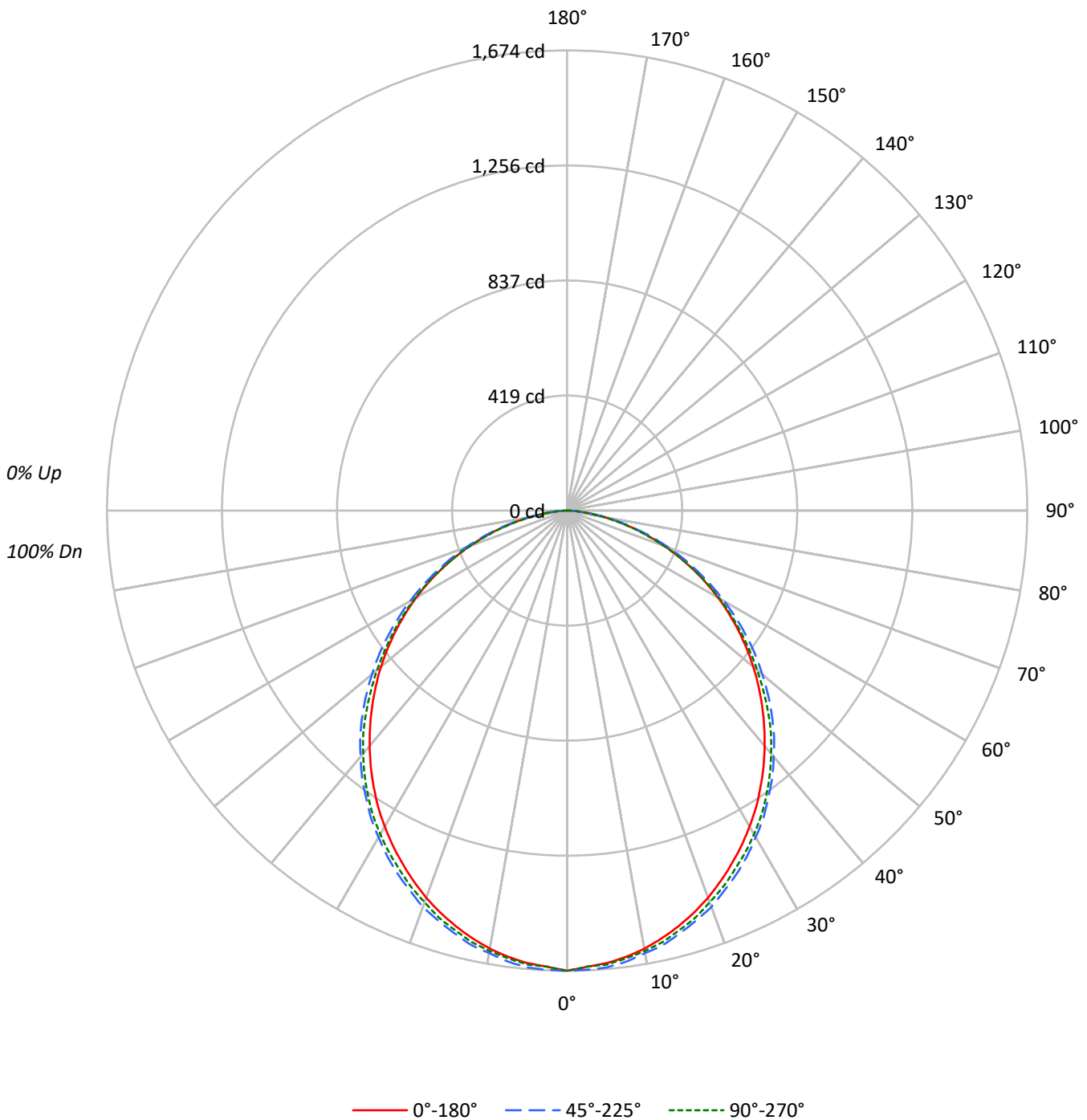
Lumens per Lamp: N/A  
Luminaire Lumens: 4401.2 lumens  
Efficiency: N/A  
Efficacy: 66.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 66.6  
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°	2252	2252	2252
5°	2232	2253	2239
10°	2211	2234	2223
15°	2181	2216	2200
20°	2146	2197	2171
25°	2104	2166	2141
30°	2062	2132	2112
35°	2015	2095	2076
40°	1963	2053	2027
45°	1908	2004	1966
50°	1851	1940	1889
55°	1784	1867	1810
60°	1707	1778	1724
65°	1609	1671	1610
70°	1481	1541	1464
75°	1304	1363	1284
80°	1059	1106	1048
85°	738	786	767



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	157.7	3.6
10°-20°	446.8	10.2
20°-30°	666.4	15.1
30°-40°	789.6	17.9
40°-50°	799.0	18.2
50°-60°	697.8	15.9
60°-70°	509.9	11.6
70°-80°	271.3	6.2
80°-90°	62.7	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°	1270.8	28.9
0°-40°	2060.4	46.8
0°-60°	3557.2	80.8
0°-90°	4401.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4401.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1674	1674	1674	1674	1674	
5°	1652	1655	1668	1672	1658	157
15°	1565	1576	1591	1600	1580	441
25°	1418	1435	1459	1464	1442	653
35°	1227	1246	1276	1285	1264	767
45°	1003	1020	1053	1054	1033	774
55°	760	776	796	784	771	680
65°	506	516	525	514	506	500
75°	251	257	262	253	247	267
85°	48	49	51	52	50	61
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1674.1	1674.1	1674.1	1674.1	1674.1
2.5°	1661.0	1666.4	1672.0	1674.4	1660.8
5°	1652.3	1655.4	1667.8	1671.6	1657.5
7.5°	1638.0	1642.7	1654.7	1656.4	1642.8
10°	1618.4	1626.8	1634.8	1643.5	1627.0
12.5°	1593.5	1604.8	1618.4	1620.0	1607.4
15°	1565.4	1575.9	1590.7	1600.3	1579.5
17.5°	1534.0	1544.1	1563.3	1565.0	1552.5
20°	1498.9	1511.5	1534.5	1538.5	1516.0
22.5°	1459.2	1476.1	1495.3	1499.1	1482.5
25°	1417.5	1434.9	1458.7	1464.1	1441.9
27.5°	1373.9	1390.6	1417.3	1421.2	1402.5
30°	1327.1	1342.8	1372.1	1378.6	1359.6
32.5°	1279.7	1295.4	1327.8	1333.2	1314.8
35°	1227.0	1246.2	1275.7	1284.6	1263.8
37.5°	1173.3	1192.0	1225.5	1233.5	1211.2
40°	1117.7	1136.2	1169.1	1175.7	1154.3
42.5°	1060.8	1079.3	1114.5	1115.6	1097.8
45°	1002.7	1020.5	1053.3	1054.2	1033.4
47.5°	943.8	961.7	991.0	987.7	968.2
50°	884.1	901.2	926.9	920.2	902.6
52.5°	822.4	838.9	863.2	852.4	835.8
55°	760.3	775.6	795.9	784.4	771.4
57.5°	697.7	713.2	728.7	717.0	705.9
60°	634.5	648.1	660.9	649.0	640.5
62.5°	570.3	582.0	593.0	581.7	573.7
65°	505.5	515.8	524.8	514.4	505.8
67.5°	440.9	449.6	458.0	447.2	438.3
70°	376.4	383.9	391.6	380.4	372.2
72.5°	312.7	319.4	326.2	315.3	308.2
75°	250.8	256.6	262.1	252.6	247.0
77.5°	191.7	196.6	200.4	194.3	188.9
80°	136.7	140.4	142.7	140.2	135.2
82.5°	87.9	90.5	91.7	91.6	88.3
85°	47.8	48.7	50.9	51.5	49.7
87.5°	18.5	19.7	20.2	21.8	20.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)