

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: P489129

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-3LO-50-120-EDD**

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: P489129  
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-LD4-3LO-50-120-EDD  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

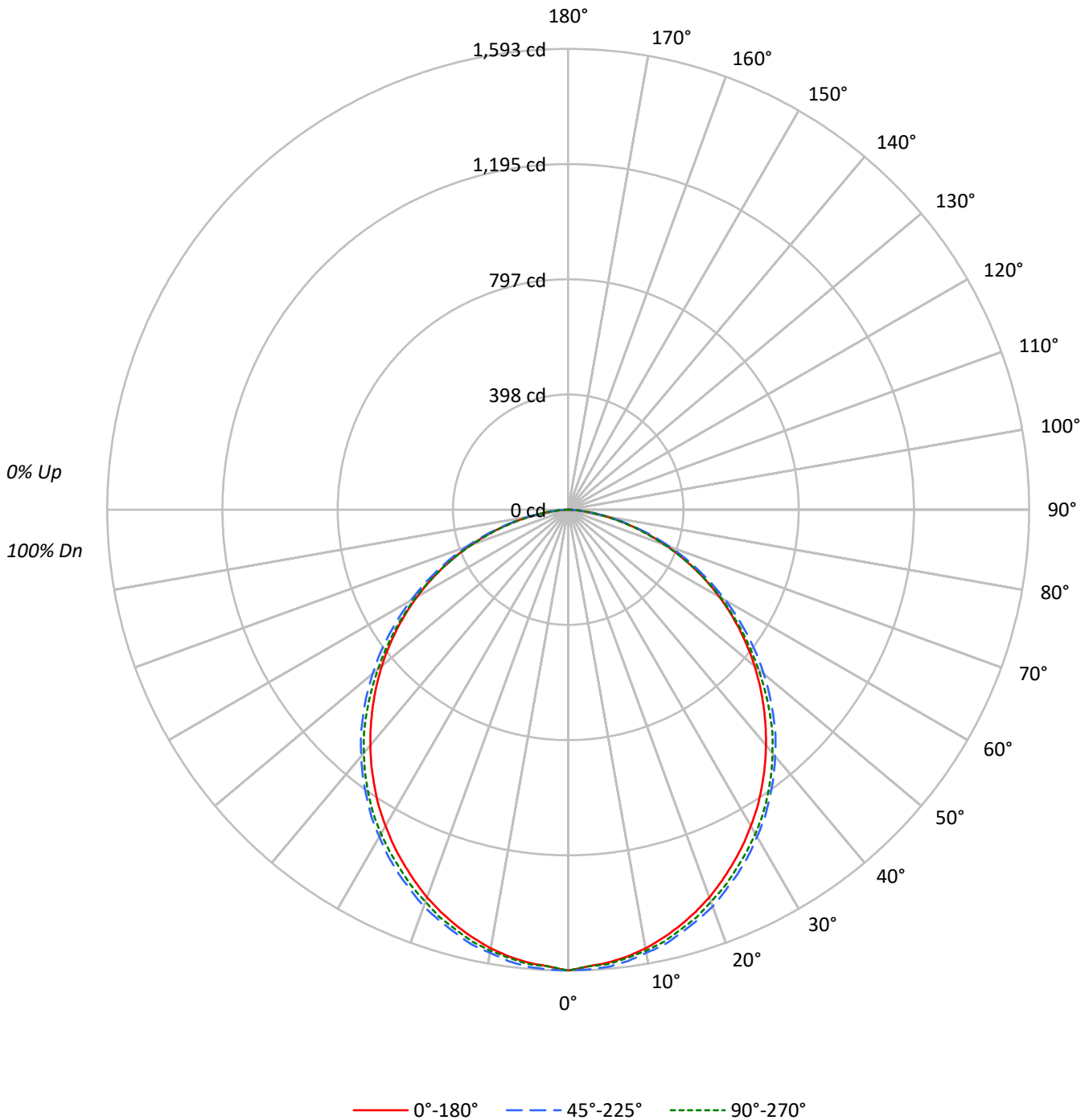
Lumens per Lamp: N/A  
Luminaire Lumens: 4187.0 lumens  
Efficiency: N/A  
Efficacy: 119.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 35.1  
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°	4286	4286	4286
5°	4246	4286	4259
10°	4207	4250	4229
15°	4149	4216	4186
20°	4084	4180	4130
25°	4004	4120	4073
30°	3923	4056	4019
35°	3835	3987	3950
40°	3735	3907	3857
45°	3630	3813	3741
50°	3521	3691	3595
55°	3393	3552	3443
60°	3249	3384	3279
65°	3062	3179	3064
70°	2817	2931	2786
75°	2481	2593	2443
80°	2016	2103	1993
85°	1405	1497	1460



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	150.0	3.6
10°-20°	425.0	10.2
20°-30°	633.9	15.1
30°-40°	751.2	17.9
40°-50°	760.1	18.2
50°-60°	663.8	15.9
60°-70°	485.1	11.6
70°-80°	258.1	6.2
80°-90°	59.7	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°	1209.0	28.9
0°-40°	1960.2	46.8
0°-60°	3384.1	80.8
0°-90°	4187.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4187.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1593	1593	1593	1593	1593	
5°	1572	1575	1587	1590	1577	149
15°	1489	1499	1513	1522	1503	420
25°	1348	1365	1388	1393	1372	621
35°	1167	1186	1214	1222	1202	730
45°	954	971	1002	1003	983	736
55°	723	738	757	746	734	647
65°	481	491	499	489	481	476
75°	239	244	249	240	235	254
85°	46	46	48	49	47	58
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1592.6	1592.6	1592.6	1592.6	1592.6
2.5°	1580.1	1585.3	1590.6	1592.9	1580.0
5°	1571.8	1574.8	1586.6	1590.3	1576.8
7.5°	1558.2	1562.7	1574.2	1575.8	1562.9
10°	1539.7	1547.6	1555.3	1563.5	1547.8
12.5°	1515.9	1526.7	1539.7	1541.1	1529.2
15°	1489.2	1499.2	1513.3	1522.4	1502.7
17.5°	1459.3	1469.0	1487.2	1488.9	1476.9
20°	1426.0	1437.9	1459.8	1463.7	1442.3
22.5°	1388.2	1404.3	1422.5	1426.2	1410.4
25°	1348.5	1365.1	1387.7	1392.8	1371.7
27.5°	1307.0	1323.0	1348.3	1352.0	1334.2
30°	1262.6	1277.5	1305.4	1311.5	1293.4
32.5°	1217.4	1232.4	1263.2	1268.4	1250.8
35°	1167.3	1185.6	1213.6	1222.1	1202.3
37.5°	1116.2	1134.0	1165.8	1173.4	1152.2
40°	1063.3	1080.9	1112.2	1118.5	1098.1
42.5°	1009.2	1026.8	1060.3	1061.3	1044.4
45°	953.9	970.9	1002.0	1002.9	983.1
47.5°	897.8	914.9	942.8	939.7	921.1
50°	841.1	857.4	881.7	875.4	858.7
52.5°	782.4	798.1	821.2	810.9	795.1
55°	723.3	737.9	757.1	746.2	733.9
57.5°	663.7	678.5	693.3	682.1	671.5
60°	603.6	616.6	628.7	617.4	609.3
62.5°	542.6	553.7	564.2	553.4	545.7
65°	480.9	490.7	499.3	489.3	481.2
67.5°	419.5	427.8	435.7	425.4	417.0
70°	358.1	365.2	372.5	361.9	354.1
72.5°	297.5	303.8	310.3	300.0	293.2
75°	238.6	244.1	249.4	240.3	235.0
77.5°	182.4	187.0	190.7	184.8	179.7
80°	130.1	133.6	135.7	133.4	128.6
82.5°	83.6	86.1	87.3	87.1	84.0
85°	45.5	46.3	48.5	48.9	47.3
87.5°	17.6	18.7	19.2	20.7	19.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)