

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: P489074

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-2HI-30-120-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: P489074  
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-LD4-2HI-30-120-EDD-90  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

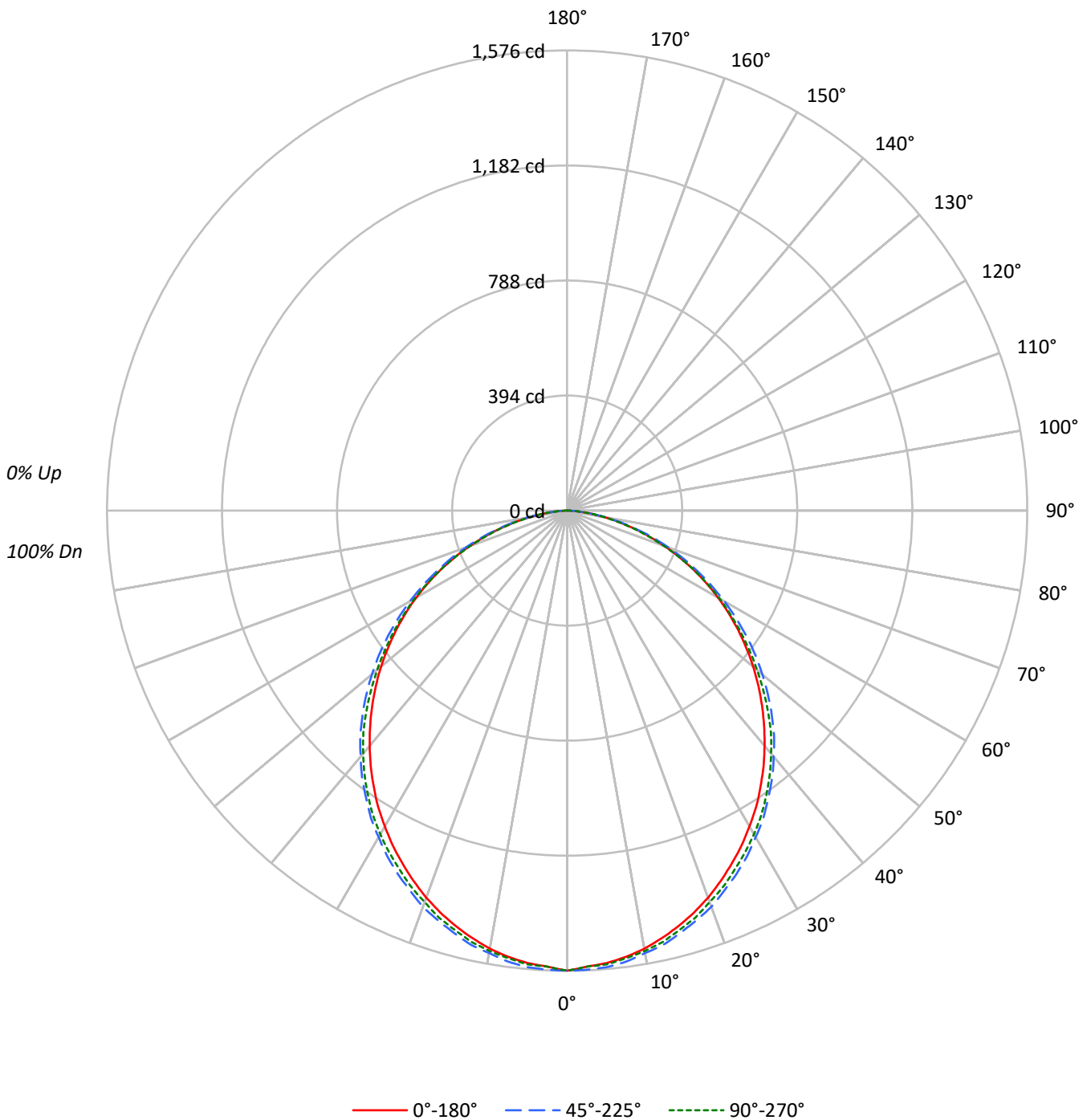
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4142.7 lumens  
Efficiency: N/A  
Efficacy: 95.9 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): 43.2  
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°	4240	4240	4240
5°	4201	4240	4214
10°	4163	4205	4185
15°	4105	4171	4142
20°	4040	4136	4086
25°	3961	4077	4030
30°	3882	4013	3976
35°	3794	3945	3908
40°	3695	3866	3817
45°	3592	3773	3702
50°	3484	3652	3557
55°	3357	3514	3407
60°	3215	3348	3244
65°	3030	3145	3032
70°	2788	2900	2756
75°	2455	2566	2417
80°	1994	2081	1971
85°	1389	1479	1445



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	148.4	3.6
10°-20°	420.5	10.2
20°-30°	627.2	15.1
30°-40°	743.3	17.9
40°-50°	752.1	18.2
50°-60°	656.8	15.9
60°-70°	480.0	11.6
70°-80°	255.4	6.2
80°-90°	59.0	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°	1196.2	28.9
0°-40°	1939.4	46.8
0°-60°	3348.3	80.8
0°-90°	4142.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4142.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1576	1576	1576	1576	1576	
5°	1555	1558	1570	1573	1560	147
15°	1474	1483	1497	1506	1487	415
25°	1334	1351	1373	1378	1357	615
35°	1155	1173	1201	1209	1190	722
45°	944	961	991	992	973	728
55°	716	730	749	738	726	640
65°	476	486	494	484	476	471
75°	236	242	247	238	232	251
85°	45	46	48	48	47	57
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1575.7	1575.7	1575.7	1575.7	1575.7
2.5°	1563.4	1568.5	1573.8	1576.1	1563.3
5°	1555.2	1558.2	1569.8	1573.4	1560.1
7.5°	1541.8	1546.2	1557.5	1559.2	1546.3
10°	1523.4	1531.2	1538.8	1547.0	1531.4
12.5°	1499.9	1510.6	1523.4	1524.8	1513.0
15°	1473.5	1483.3	1497.3	1506.3	1486.8
17.5°	1443.9	1453.4	1471.5	1473.1	1461.3
20°	1410.9	1422.7	1444.4	1448.2	1427.0
22.5°	1373.5	1389.4	1407.5	1411.1	1395.5
25°	1334.2	1350.7	1373.0	1378.1	1357.2
27.5°	1293.2	1309.0	1334.1	1337.7	1320.1
30°	1249.2	1264.0	1291.6	1297.6	1279.7
32.5°	1204.5	1219.3	1249.9	1254.9	1237.5
35°	1155.0	1173.0	1200.8	1209.1	1189.6
37.5°	1104.4	1122.0	1153.5	1161.0	1140.0
40°	1052.0	1069.4	1100.5	1106.7	1086.5
42.5°	998.5	1015.9	1049.1	1050.1	1033.3
45°	943.8	960.6	991.4	992.3	972.7
47.5°	888.3	905.3	932.8	929.7	911.3
50°	832.2	848.3	872.4	866.2	849.6
52.5°	774.1	789.7	812.5	802.3	786.7
55°	715.6	730.1	749.1	738.3	726.1
57.5°	656.7	671.3	685.9	674.9	664.4
60°	597.3	610.1	622.1	610.9	602.8
62.5°	536.8	547.8	558.2	547.5	540.0
65°	475.8	485.5	494.0	484.1	476.1
67.5°	415.0	423.2	431.1	420.9	412.6
70°	354.3	361.3	368.6	358.1	350.3
72.5°	294.4	300.6	307.0	296.8	290.1
75°	236.1	241.5	246.8	237.7	232.5
77.5°	180.4	185.0	188.6	182.9	177.8
80°	128.7	132.2	134.3	132.0	127.2
82.5°	82.7	85.2	86.4	86.2	83.1
85°	45.0	45.8	47.9	48.4	46.8
87.5°	17.4	18.6	19.0	20.5	18.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)