

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: P488696

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-2LO-50-120-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: P488696  
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-12-4-INS-A19156-LD4-2LO-50-120-EDD-90  
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

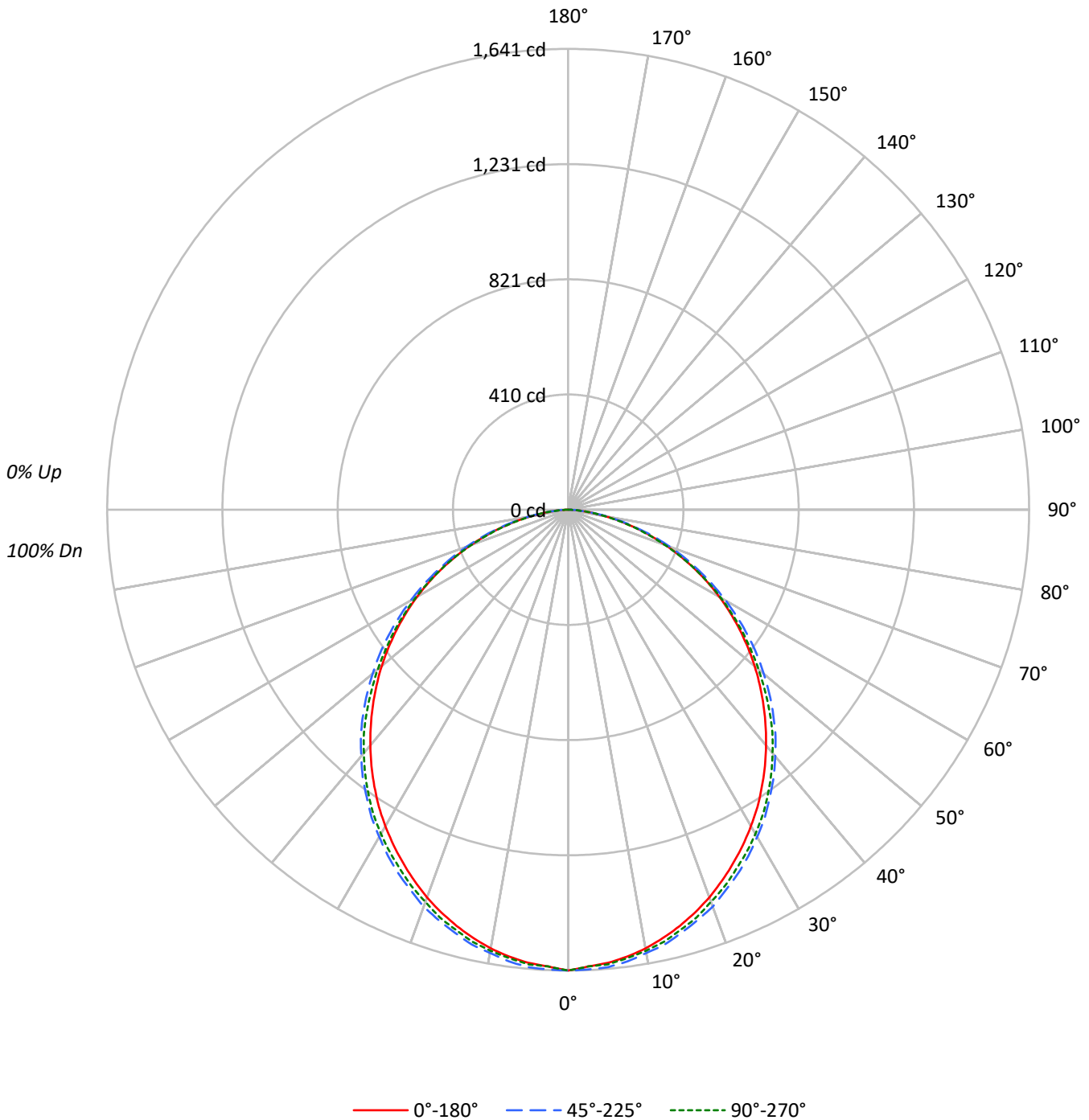
Lumens per Lamp: N/A  
Luminaire Lumens: 4314.4 lumens  
Efficiency: N/A  
Efficacy: 92.2 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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	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°	4416	4416	4416
5°	4375	4416	4389
10°	4335	4379	4358
15°	4275	4344	4314
20°	4208	4308	4256
25°	4126	4246	4197
30°	4043	4180	4141
35°	3951	4108	4070
40°	3849	4026	3975
45°	3741	3929	3855
50°	3628	3804	3704
55°	3497	3660	3548
60°	3348	3486	3379
65°	3155	3276	3157
70°	2903	3020	2871
75°	2557	2672	2517
80°	2077	2168	2053
85°	1445	1541	1504



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	154.6	3.6
10°-20°	438.0	10.2
20°-30°	653.2	15.1
30°-40°	774.1	17.9
40°-50°	783.2	18.2
50°-60°	684.0	15.9
60°-70°	499.9	11.6
70°-80°	266.0	6.2
80°-90°	61.5	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°	1245.7	28.9
0°-40°	2019.8	46.8
0°-60°	3487.1	80.8
0°-90°	4314.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4314.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1641	1641	1641	1641	1641	
5°	1620	1623	1635	1639	1625	154
15°	1534	1545	1559	1569	1548	433
25°	1390	1407	1430	1435	1414	640
35°	1203	1222	1250	1259	1239	752
45°	983	1000	1032	1033	1013	758
55°	745	760	780	769	756	666
65°	496	506	514	504	496	490
75°	246	252	257	248	242	261
85°	47	48	50	50	49	59
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1641.0	1641.0	1641.0	1641.0	1641.0
2.5°	1628.2	1633.5	1639.0	1641.4	1628.0
5°	1619.7	1622.7	1634.9	1638.7	1624.8
7.5°	1605.7	1610.3	1622.1	1623.8	1610.4
10°	1586.5	1594.7	1602.6	1611.1	1594.9
12.5°	1562.1	1573.2	1586.5	1588.0	1575.7
15°	1534.5	1544.8	1559.3	1568.7	1548.4
17.5°	1503.7	1513.7	1532.5	1534.2	1521.9
20°	1469.4	1481.7	1504.3	1508.2	1486.1
22.5°	1430.4	1447.0	1465.8	1469.6	1453.3
25°	1389.5	1406.6	1429.9	1435.2	1413.5
27.5°	1346.8	1363.2	1389.4	1393.1	1374.8
30°	1301.0	1316.4	1345.1	1351.4	1332.8
32.5°	1254.5	1269.9	1301.7	1307.0	1288.8
35°	1202.8	1221.6	1250.5	1259.3	1238.9
37.5°	1150.2	1168.5	1201.3	1209.2	1187.3
40°	1095.6	1113.7	1146.1	1152.6	1131.5
42.5°	1039.9	1058.0	1092.5	1093.6	1076.1
45°	983.0	1000.4	1032.5	1033.4	1013.0
47.5°	925.2	942.8	971.5	968.2	949.1
50°	866.7	883.4	908.6	902.1	884.8
52.5°	806.2	822.4	846.2	835.6	819.3
55°	745.3	760.3	780.2	768.9	756.2
57.5°	683.9	699.1	714.3	702.9	691.9
60°	622.0	635.4	647.8	636.2	627.8
62.5°	559.1	570.6	581.3	570.2	562.3
65°	495.5	505.6	514.5	504.2	495.8
67.5°	432.2	440.8	449.0	438.4	429.7
70°	369.0	376.3	383.8	372.9	364.9
72.5°	306.6	313.1	319.7	309.1	302.1
75°	245.9	251.5	257.0	247.6	242.1
77.5°	187.9	192.7	196.5	190.5	185.2
80°	134.0	137.6	139.9	137.5	132.5
82.5°	86.2	88.7	89.9	89.8	86.5
85°	46.8	47.7	49.9	50.4	48.7
87.5°	18.1	19.3	19.8	21.4	19.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)