

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: P488695

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-2LO-40-120-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: P488695  
 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-40-120-EDD  
 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: 4876.3 lumens  
 Efficiency: N/A  
 Efficacy: 104.2 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

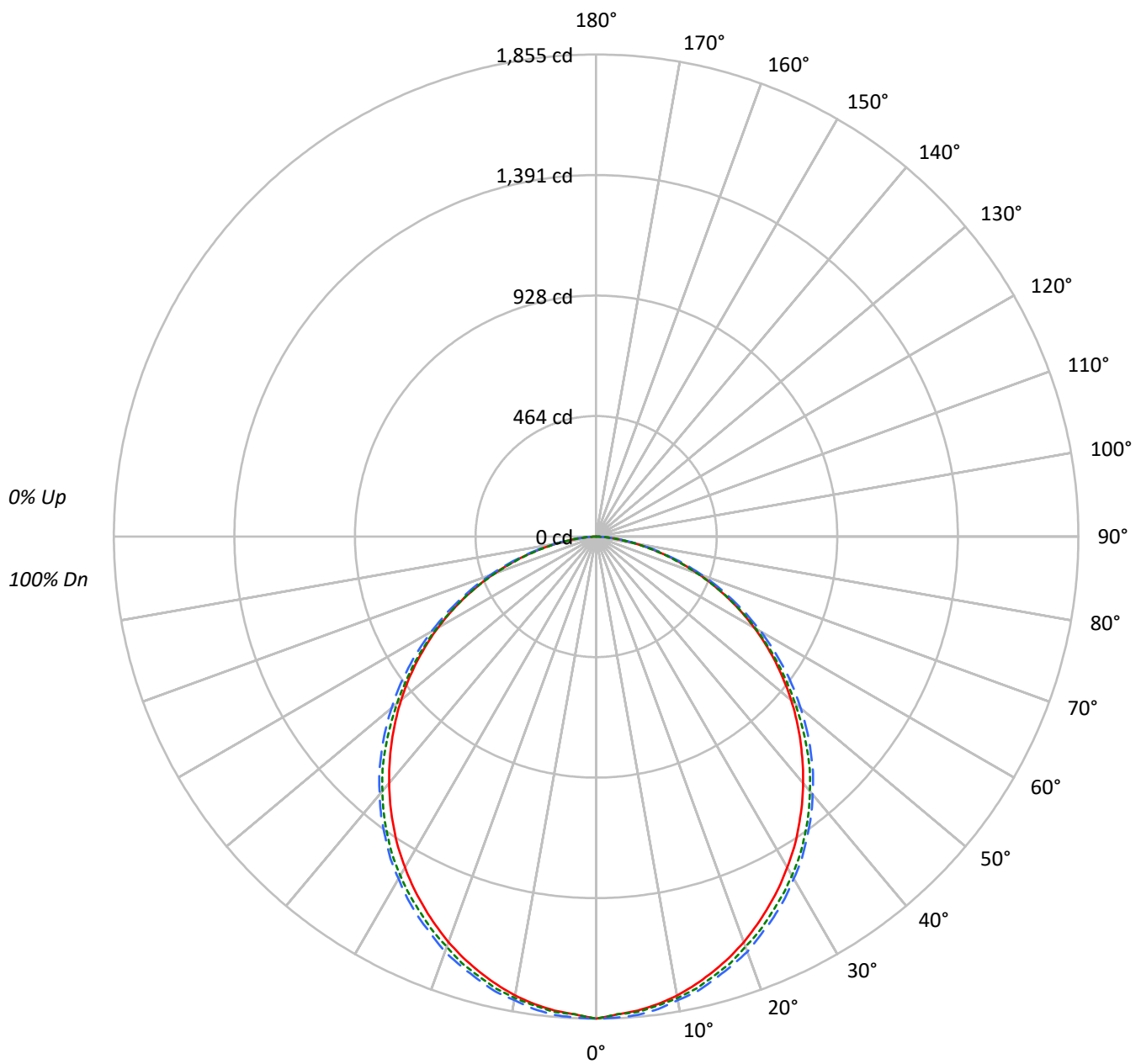
Input Watts (W): 46.8  
 Input Voltage (V): NR  
 Input Current (Ain): NR  
 Voltage Rise (V): NR  
 Power Factor: NR  
 Total Harmonic Distortion (THDi): NR  
 Frequency (hertz): 60  
 Stabilization Time: NR  
 Operation Time: NR  
 Ambient Temperature (°C): NR  
 Test Distance: 25 FT



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### Luminous Intensity Polar Plot



— 0°-180°    - - 45°-225°    ··· 90°-270°



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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				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
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°	4991	4991	4991
5°	4945	4991	4961
10°	4900	4949	4926
15°	4832	4910	4875
20°	4756	4869	4810
25°	4663	4798	4744
30°	4569	4724	4680
35°	4466	4643	4600
40°	4350	4550	4493
45°	4228	4441	4357
50°	4101	4299	4186
55°	3952	4137	4010
60°	3784	3941	3819
65°	3566	3703	3568
70°	3281	3413	3245
75°	2889	3019	2845
80°	2348	2450	2321
85°	1633	1741	1701



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	174.7	3.6
10°-20°	495.0	10.2
20°-30°	738.3	15.1
30°-40°	874.9	17.9
40°-50°	885.2	18.2
50°-60°	773.1	15.9
60°-70°	565.0	11.6
70°-80°	300.6	6.2
80°-90°	69.5	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
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0°-30°	1408.0	28.9
0°-40°	2282.9	46.8
0°-60°	3941.2	80.8
0°-90°	4876.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4876.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1855	1855	1855	1855	1855	
5°	1831	1834	1848	1852	1836	174
15°	1734	1746	1762	1773	1750	489
25°	1570	1590	1616	1622	1598	724
35°	1360	1381	1413	1423	1400	850
45°	1111	1131	1167	1168	1145	857
55°	842	859	882	869	855	753
65°	560	571	582	570	560	554
75°	278	284	290	280	274	295
85°	53	54	56	57	55	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1854.8	1854.8	1854.8	<i>1854.8</i>	1854.8
2.5°	<i>1840.3</i>	<i>1846.3</i>	<i>1852.5</i>	<i>1855.2</i>	<i>1840.1</i>
5°	1830.6	1834.1	1847.8	<i>1852.1</i>	1836.4
7.5°	1814.8	1820.0	1833.3	<i>1835.3</i>	1820.2
10°	1793.1	1802.4	1811.3	<i>1821.0</i>	1802.6
12.5°	1765.5	1778.1	1793.1	<i>1794.9</i>	1781.0
15°	1734.4	1746.0	1762.4	<i>1773.0</i>	1750.0
17.5°	1699.6	1710.8	1732.1	<i>1734.0</i>	1720.1
20°	1660.8	1674.7	1700.2	<i>1704.6</i>	1679.7
22.5°	1616.7	1635.4	1656.7	<i>1660.9</i>	1642.6
25°	1570.5	1589.8	1616.1	<i>1622.1</i>	1597.6
27.5°	1522.2	1540.7	1570.3	<i>1574.6</i>	1553.9
30°	1470.4	1487.8	1520.3	<i>1527.4</i>	1506.3
32.5°	1417.8	1435.2	1471.2	<i>1477.2</i>	1456.7
35°	1359.5	1380.7	1413.4	<i>1423.3</i>	1400.3
37.5°	1300.0	1320.6	1357.7	<i>1366.6</i>	1341.9
40°	1238.3	1258.8	1295.3	<i>1302.7</i>	1278.9
42.5°	1175.3	1195.8	1234.8	<i>1236.0</i>	1216.3
45°	1111.0	1130.7	1167.0	<i>1168.0</i>	1145.0
47.5°	1045.7	1065.6	1098.0	<i>1094.3</i>	1072.7
50°	979.6	998.5	1026.9	<i>1019.6</i>	1000.0
52.5°	911.2	929.5	956.4	<i>944.4</i>	926.0
55°	842.4	859.4	881.8	<i>869.0</i>	854.7
57.5°	773.0	790.2	807.4	<i>794.4</i>	782.1
60°	703.0	718.1	732.2	<i>719.1</i>	709.6
62.5°	631.9	644.9	657.0	<i>644.5</i>	635.6
65°	560.0	571.4	581.5	<i>569.9</i>	560.4
67.5°	488.5	498.2	507.5	<i>495.5</i>	485.6
70°	417.0	425.3	433.8	<i>421.5</i>	412.4
72.5°	346.5	353.8	361.4	<i>349.4</i>	341.5
75°	277.9	284.3	290.4	<i>279.8</i>	273.6
77.5°	212.4	217.8	222.0	<i>215.3</i>	209.3
80°	151.5	155.6	158.1	<i>155.4</i>	149.8
82.5°	97.4	100.3	101.6	<i>101.5</i>	97.8
85°	52.9	53.9	56.4	<i>57.0</i>	55.1
87.5°	20.5	21.8	22.4	<i>24.2</i>	22.2
90°	0.0	0.0	0.0	<i>0.0</i>	0.0

(END OF REPORT)