

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: P489151

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-4HI-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: P489151  
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-LD4-4HI-40-120-EDD  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

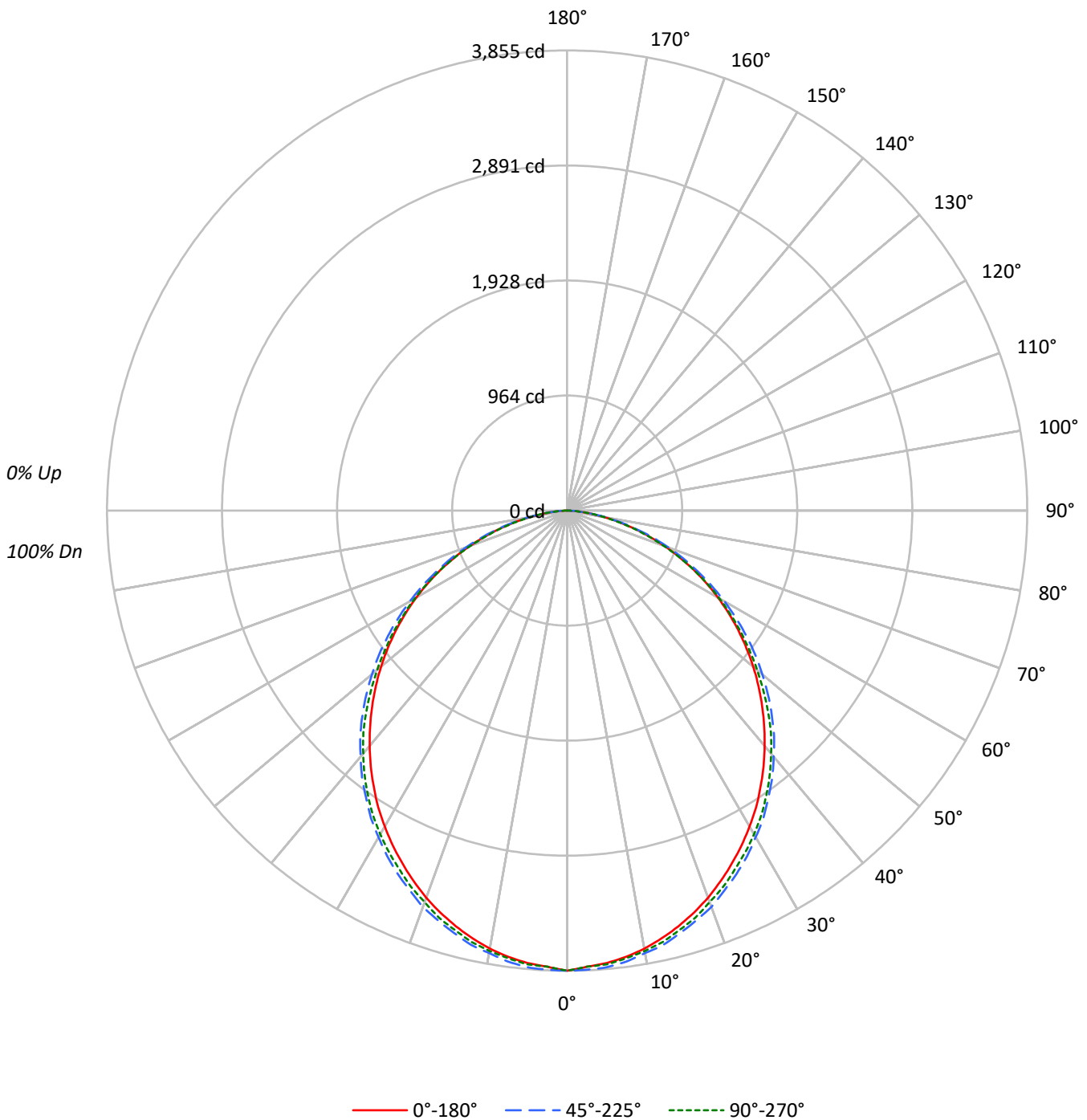
Lumens per Lamp: N/A  
Luminaire Lumens: 10134.6 lumens  
Efficiency: N/A  
Efficacy: 117.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 86.4  
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	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°	10373	10373	10373
5°	10277	10374	10310
10°	10183	10286	10237
15°	10042	10204	10133
20°	9884	10119	9997
25°	9691	9973	9859
30°	9496	9818	9728
35°	9282	9650	9560
40°	9041	9457	9337
45°	8787	9230	9056
50°	8523	8935	8701
55°	8214	8598	8334
60°	7864	8190	7937
65°	7411	7695	7416
70°	6819	7094	6744
75°	6004	6276	5913
80°	4880	5091	4824
85°	3396	3622	3535



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	363.0	3.6
10°-20°	1028.8	10.2
20°-30°	1534.4	15.1
30°-40°	1818.3	17.9
40°-50°	1839.8	18.2
50°-60°	1606.8	15.9
60°-70°	1174.2	11.6
70°-80°	624.8	6.2
80°-90°	144.4	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°	2926.3	28.9
0°-40°	4744.6	46.8
0°-60°	8191.2	80.8
0°-90°	10134.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10134.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3855	3855	3855	3855	3855	
5°	3805	3812	3840	3849	3817	361
15°	3605	3629	3663	3685	3637	1016
25°	3264	3304	3359	3371	3320	1504
35°	2826	2870	2938	2958	2910	1767
45°	2309	2350	2425	2427	2380	1781
55°	1751	1786	1833	1806	1776	1565
65°	1164	1188	1208	1184	1165	1152
75°	578	591	604	582	569	614
85°	110	112	117	118	114	139
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3854.8	3854.8	3854.8	<i>3854.8</i>	3854.8
2.5°	<i>3824.7</i>	<i>3837.2</i>	<i>3850.0</i>	<i>3855.6</i>	<i>3824.3</i>
5°	3804.6	3811.9	3840.4	<i>3849.2</i>	3816.7
7.5°	3771.7	3782.5	3810.3	<i>3814.3</i>	3782.9
10°	3726.7	3746.0	3764.5	<i>3784.6</i>	3746.4
12.5°	3669.3	3695.4	3726.7	<i>3730.3</i>	3701.4
15°	3604.6	3628.7	3662.9	<i>3685.0</i>	3637.2
17.5°	3532.3	3555.6	3599.8	<i>3603.8</i>	3574.9
20°	3451.6	3480.5	3533.5	<i>3542.8</i>	3491.0
22.5°	3360.0	3399.0	3443.2	<i>3452.0</i>	3413.9
25°	3264.0	3304.2	3358.8	<i>3371.3</i>	3320.3
27.5°	3163.6	3202.2	3263.6	<i>3272.5</i>	3229.5
30°	3056.0	3092.1	3159.6	<i>3174.5</i>	3130.7
32.5°	2946.8	2982.9	3057.6	<i>3070.1</i>	3027.5
35°	2825.5	2869.6	2937.5	<i>2958.0</i>	2910.2
37.5°	2701.8	2744.7	2821.8	<i>2840.3</i>	2788.9
40°	2573.6	2616.2	2692.1	<i>2707.4</i>	2658.0
42.5°	2442.7	2485.3	2566.4	<i>2568.8</i>	2527.9
45°	2309.0	2349.9	2425.4	<i>2427.4</i>	2379.7
47.5°	2173.2	2214.6	2282.1	<i>2274.4</i>	2229.4
50°	2035.9	2075.2	2134.3	<i>2119.0</i>	2078.4
52.5°	1893.7	1931.8	1987.7	<i>1962.8</i>	1924.6
55°	1750.7	1786.0	1832.6	<i>1806.1</i>	1776.4
57.5°	1606.5	1642.3	1678.0	<i>1651.1</i>	1625.4
60°	1461.1	1492.5	1521.8	<i>1494.5</i>	1474.8
62.5°	1313.3	1340.2	1365.5	<i>1339.4</i>	1321.0
65°	1163.9	1187.6	1208.5	<i>1184.4</i>	1164.7
67.5°	1015.3	1035.4	1054.7	<i>1029.8</i>	1009.3
70°	866.7	884.0	901.7	<i>876.0</i>	857.1
72.5°	720.1	735.4	751.0	<i>726.1</i>	709.7
75°	577.5	590.8	603.6	<i>581.6</i>	568.7
77.5°	441.4	452.6	461.5	<i>447.4</i>	435.0
80°	314.9	323.3	328.5	<i>322.9</i>	311.3
82.5°	202.4	208.4	211.3	<i>210.9</i>	203.2
85°	110.0	112.1	117.3	<i>118.5</i>	114.5
87.5°	42.6	45.4	46.6	<i>50.2</i>	46.2
90°	0.0	0.0	0.0	<i>0.0</i>	0.0

(END OF REPORT)