

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: P489149

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-4HI-35-120-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: P489149  
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-35-120-EDD  
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

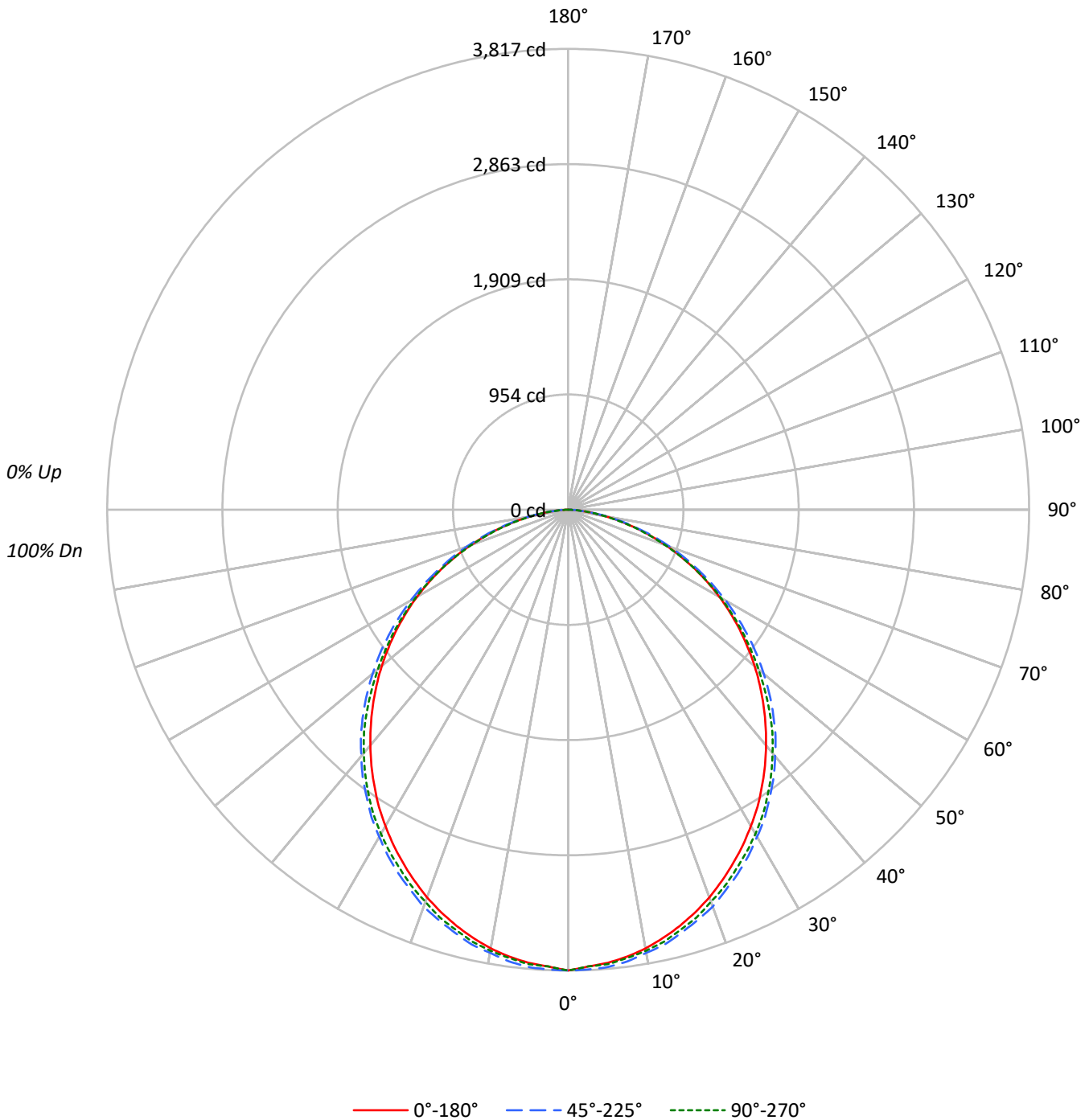
Lumens per Lamp: N/A  
Luminaire Lumens: 10034.3 lumens  
Efficiency: N/A  
Efficacy: 116.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

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	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°	10271	10271	10271
5°	10176	10271	10208
10°	10082	10185	10136
15°	9943	10103	10033
20°	9786	10019	9898
25°	9595	9874	9761
30°	9402	9721	9632
35°	9190	9554	9466
40°	8951	9363	9245
45°	8700	9139	8966
50°	8439	8846	8615
55°	8132	8513	8252
60°	7786	8109	7859
65°	7338	7619	7343
70°	6751	7024	6677
75°	5945	6214	5855
80°	4832	5041	4776
85°	3365	3585	3498



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	359.5	3.6
10°-20°	1018.6	10.2
20°-30°	1519.2	15.1
30°-40°	1800.3	17.9
40°-50°	1821.6	18.2
50°-60°	1590.9	15.9
60°-70°	1162.6	11.6
70°-80°	618.6	6.2
80°-90°	143.0	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
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0°-30°	2897.3	28.9
0°-40°	4697.6	46.8
0°-60°	8110.2	80.8
0°-90°	10034.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10034.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3817	3817	3817	3817	3817	
5°	3767	3774	3802	3811	3779	357
15°	3569	3593	3627	3648	3601	1006
25°	3232	3272	3326	3338	3287	1489
35°	2798	2841	2908	2929	2881	1749
45°	2286	2327	2401	2403	2356	1764
55°	1733	1768	1814	1788	1759	1549
65°	1152	1176	1196	1173	1153	1140
75°	572	585	598	576	563	608
85°	109	111	116	117	113	138
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3816.7	3816.7	3816.7	3816.7	3816.7
2.5°	3786.9	3799.2	3811.9	3817.5	3786.5
5°	3767.0	3774.1	3802.4	3811.1	3778.9
7.5°	3734.4	3745.1	3772.6	3776.5	3745.5
10°	3689.8	3708.9	3727.2	3747.1	3709.3
12.5°	3633.0	3658.8	3689.8	3693.4	3664.8
15°	3569.0	3592.8	3626.6	3648.5	3601.2
17.5°	3497.4	3520.4	3564.2	3568.2	3539.5
20°	3417.4	3446.1	3498.6	3507.7	3456.4
22.5°	3326.8	3365.4	3409.1	3417.8	3380.1
25°	3231.7	3271.5	3325.6	3337.9	3287.4
27.5°	3132.3	3170.5	3231.3	3240.1	3197.5
30°	3025.8	3061.5	3128.4	3143.1	3099.7
32.5°	2917.6	2953.4	3027.3	3039.7	2997.5
35°	2797.5	2841.2	2908.4	2928.7	2881.4
37.5°	2675.0	2717.6	2793.9	2812.2	2761.3
40°	2548.2	2590.3	2665.5	2680.6	2631.7
42.5°	2418.5	2460.7	2541.0	2543.4	2502.8
45°	2286.1	2326.7	2401.4	2403.4	2356.1
47.5°	2151.7	2192.7	2259.5	2251.9	2207.4
50°	2015.7	2054.7	2113.1	2098.0	2057.9
52.5°	1874.9	1912.7	1968.0	1943.3	1905.6
55°	1733.4	1768.4	1814.5	1788.3	1758.8
57.5°	1590.6	1626.0	1661.4	1634.8	1609.3
60°	1446.7	1477.7	1506.7	1479.7	1460.2
62.5°	1300.3	1327.0	1352.0	1326.2	1307.9
65°	1152.4	1175.9	1196.5	1172.7	1153.2
67.5°	1005.3	1025.2	1044.2	1019.6	999.3
70°	858.1	875.2	892.7	867.3	848.6
72.5°	713.0	728.1	743.6	719.0	702.7
75°	571.8	585.0	597.7	575.8	563.1
77.5°	437.0	448.2	456.9	443.0	430.7
80°	311.8	320.1	325.3	319.7	308.2
82.5°	200.4	206.4	209.2	208.8	201.2
85°	109.0	110.9	116.1	117.3	113.3
87.5°	42.2	44.9	46.1	49.7	45.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)