

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: P488739

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-3STD-30-120-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: P488739
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-LD4-3STD-30-120-EDD
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

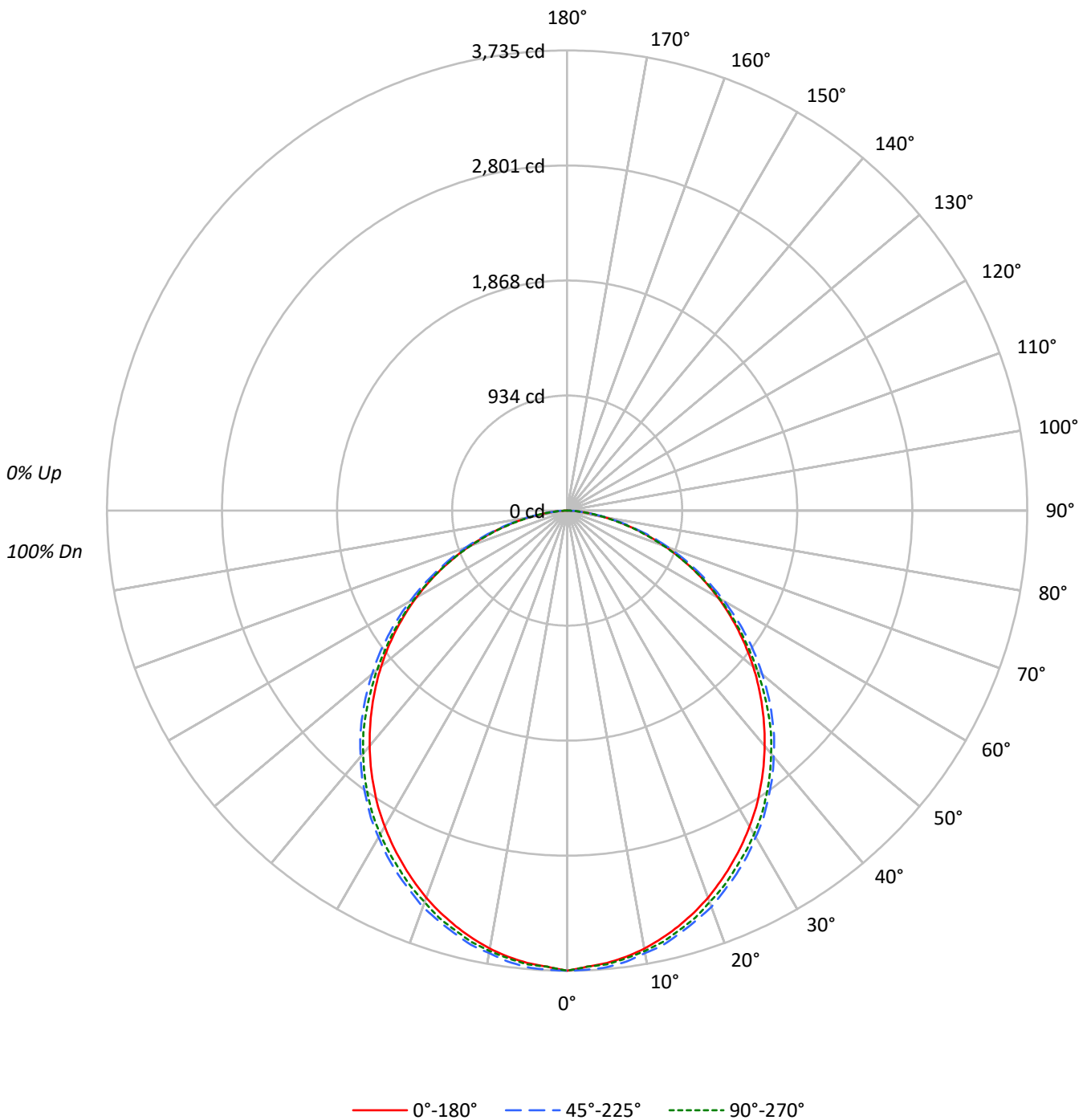
Lumens per Lamp: N/A
Luminaire Lumens: 9819.2 lumens
Efficiency: N/A
Efficacy: 98.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	10051	10051	10051
5°	9957	10051	9989
10°	9866	9966	9918
15°	9729	9887	9818
20°	9577	9804	9686
25°	9390	9663	9552
30°	9200	9512	9425
35°	8993	9350	9263
40°	8759	9162	9047
45°	8514	8943	8774
50°	8258	8657	8431
55°	7958	8330	8075
60°	7619	7935	7690
65°	7181	7456	7186
70°	6607	6873	6534
75°	5818	6081	5729
80°	4728	4933	4674
85°	3291	3507	3424



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	351.7	3.6
10°-20°	996.8	10.2
20°-30°	1486.7	15.1
30°-40°	1761.7	17.9
40°-50°	1782.6	18.2
50°-60°	1556.8	15.9
60°-70°	1137.7	11.6
70°-80°	605.3	6.2
80°-90°	139.9	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°	2835.2	28.9
0°-40°	4596.9	46.8
0°-60°	7936.3	80.8
0°-90°	9819.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9819.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3735	3735	3735	3735	3735	
5°	3686	3693	3721	3729	3698	350
15°	3492	3516	3549	3570	3524	985
25°	3162	3201	3254	3266	3217	1457
35°	2738	2780	2846	2866	2820	1712
45°	2237	2277	2350	2352	2306	1726
55°	1696	1730	1776	1750	1721	1516
65°	1128	1151	1171	1148	1128	1116
75°	560	572	585	564	551	595
85°	107	109	114	115	111	135
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3734.9	3734.9	3734.9	3734.9	3734.9
2.5°	3705.7	3717.8	3730.2	3735.7	3705.3
5°	3686.2	3693.2	3720.9	3729.4	3697.9
7.5°	3654.3	3664.8	3691.7	3695.6	3665.2
10°	3610.7	3629.4	3647.3	3666.8	3629.8
12.5°	3555.1	3580.4	3610.7	3614.2	3586.2
15°	3492.4	3515.8	3548.9	3570.3	3524.0
17.5°	3422.4	3445.0	3487.8	3491.7	3463.7
20°	3344.2	3372.2	3423.6	3432.5	3382.3
22.5°	3255.5	3293.2	3336.0	3344.6	3307.6
25°	3162.5	3201.4	3254.3	3266.4	3216.9
27.5°	3065.2	3102.5	3162.1	3170.6	3129.0
30°	2960.9	2995.9	3061.3	3075.7	3033.3
32.5°	2855.1	2890.1	2962.5	2974.5	2933.3
35°	2737.5	2780.3	2846.1	2865.9	2819.6
37.5°	2617.7	2659.3	2734.0	2751.9	2702.1
40°	2493.5	2534.8	2608.3	2623.1	2575.3
42.5°	2366.7	2407.9	2486.5	2488.9	2449.2
45°	2237.1	2276.8	2350.0	2351.9	2305.6
47.5°	2105.6	2145.7	2211.0	2203.6	2160.1
50°	1972.5	2010.6	2067.8	2053.1	2013.8
52.5°	1834.8	1871.7	1925.8	1901.7	1864.7
55°	1696.2	1730.5	1775.6	1749.9	1721.1
57.5°	1556.5	1591.2	1625.8	1599.7	1574.8
60°	1415.7	1446.0	1474.4	1448.0	1428.9
62.5°	1272.5	1298.5	1323.0	1297.8	1279.9
65°	1127.7	1150.7	1170.9	1147.5	1128.5
67.5°	983.7	1003.2	1021.9	997.7	977.9
70°	839.7	856.5	873.6	848.7	830.4
72.5°	697.7	712.5	727.7	703.5	687.6
75°	559.6	572.4	584.9	563.5	551.0
77.5°	427.7	438.6	447.1	433.5	421.4
80°	305.1	313.3	318.3	312.9	301.6
82.5°	196.1	202.0	204.7	204.3	196.9
85°	106.6	108.6	113.6	114.8	110.9
87.5°	41.2	44.0	45.1	48.6	44.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)