

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: P488711

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-3HI-20-120-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: P488711
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-LD4-3HI-20-120-EDD
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

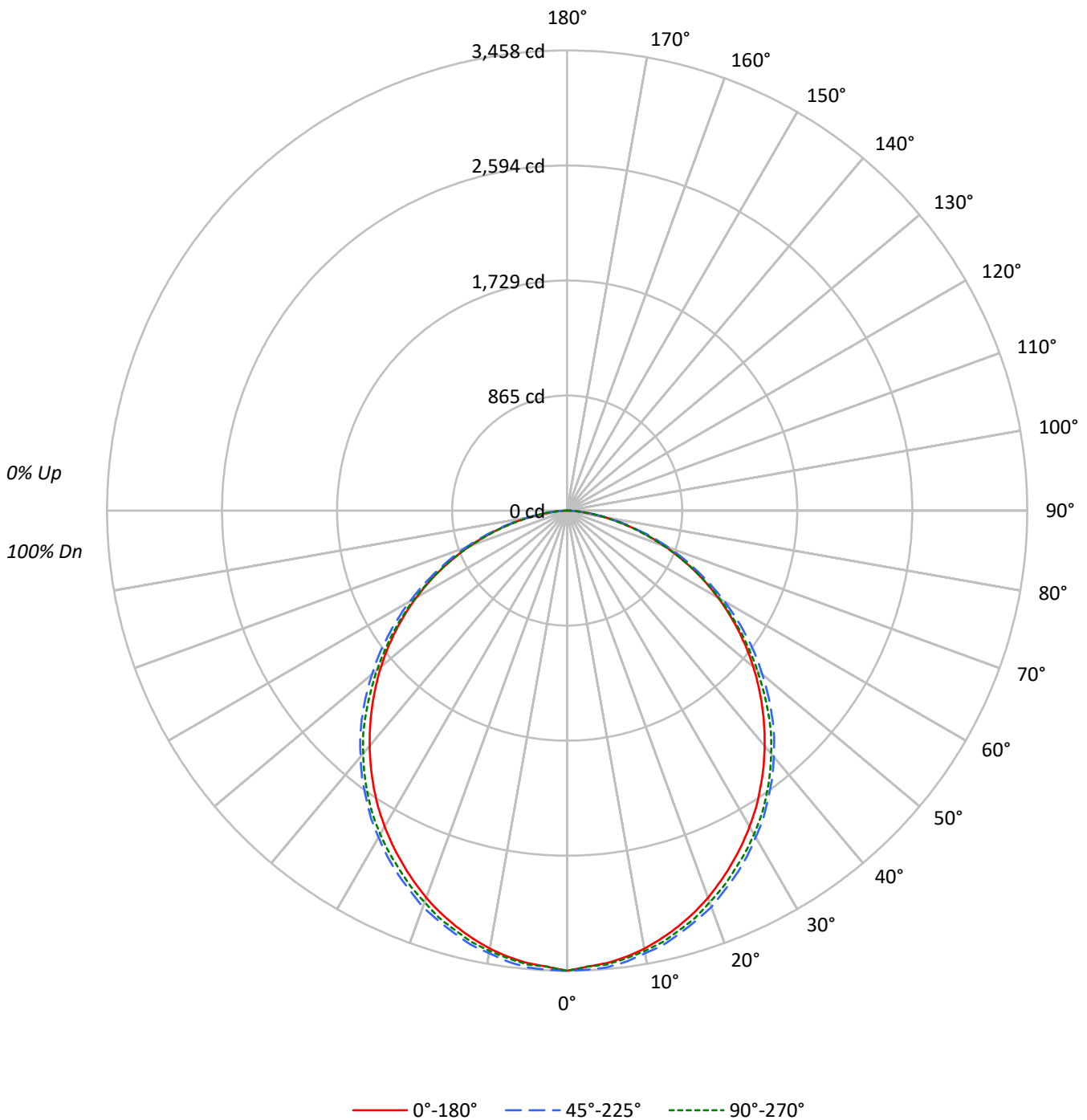
Lumens per Lamp: N/A
Luminaire Lumens: 9091.6 lumens
Efficiency: N/A
Efficacy: 70.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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°	9306	9306	9306
5°	9220	9306	9249
10°	9135	9228	9183
15°	9009	9154	9090
20°	8867	9078	8968
25°	8694	8947	8844
30°	8519	8807	8727
35°	8327	8657	8576
40°	8110	8484	8376
45°	7883	8280	8124
50°	7646	8015	7806
55°	7368	7713	7476
60°	7055	7347	7120
65°	6648	6903	6653
70°	6117	6364	6050
75°	5387	5630	5305
80°	4378	4567	4327
85°	3047	3248	3171



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	325.7	3.6
10°-20°	922.9	10.2
20°-30°	1376.5	15.1
30°-40°	1631.2	17.9
40°-50°	1650.5	18.2
50°-60°	1441.5	15.9
60°-70°	1053.4	11.6
70°-80°	560.5	6.2
80°-90°	129.5	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°	2625.1	28.9
0°-40°	4256.3	46.8
0°-60°	7348.2	80.8
0°-90°	9091.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9091.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3458	3458	3458	3458	3458	
5°	3413	3420	3445	3453	3424	324
15°	3234	3255	3286	3306	3263	912
25°	2928	2964	3013	3024	2979	1349
35°	2535	2574	2635	2654	2611	1585
45°	2071	2108	2176	2178	2135	1598
55°	1570	1602	1644	1620	1594	1404
65°	1044	1065	1084	1062	1045	1033
75°	518	530	542	522	510	551
85°	99	100	105	106	103	125
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3458.1	3458.1	3458.1	3458.1	3458.1
2.5°	3431.1	3442.3	3453.8	3458.8	3430.7
5°	3413.1	3419.6	3445.2	3453.1	3423.9
7.5°	3383.5	3393.3	3418.1	3421.7	3393.6
10°	3343.2	3360.5	3377.1	3395.1	3360.8
12.5°	3291.7	3315.1	3343.2	3346.4	3320.5
15°	3233.7	3255.3	3285.9	3305.7	3262.8
17.5°	3168.8	3189.7	3229.3	3232.9	3207.0
20°	3096.4	3122.3	3169.9	3178.2	3131.7
22.5°	3014.2	3049.2	3088.8	3096.7	3062.5
25°	2928.1	2964.2	3013.2	3024.3	2978.6
27.5°	2838.1	2872.6	2927.8	2935.7	2897.1
30°	2741.5	2773.9	2834.4	2847.8	2808.5
32.5°	2643.5	2675.9	2742.9	2754.1	2715.9
35°	2534.7	2574.3	2635.2	2653.6	2610.7
37.5°	2423.7	2462.3	2531.4	2548.0	2501.9
40°	2308.8	2347.0	2415.1	2428.8	2384.4
42.5°	2191.3	2229.5	2302.3	2304.5	2267.7
45°	2071.3	2108.1	2175.8	2177.6	2134.8
47.5°	1949.6	1986.7	2047.2	2040.4	2000.0
50°	1826.3	1861.6	1914.6	1900.9	1864.5
52.5°	1698.8	1733.0	1783.1	1760.8	1726.5
55°	1570.5	1602.2	1644.0	1620.3	1593.6
57.5°	1441.2	1473.3	1505.3	1481.2	1458.1
60°	1310.8	1338.9	1365.2	1340.7	1323.0
62.5°	1178.2	1202.3	1225.0	1201.6	1185.0
65°	1044.1	1065.4	1084.1	1062.5	1044.9
67.5°	910.8	928.8	946.1	923.8	905.4
70°	777.5	793.0	808.9	785.8	768.9
72.5°	646.0	659.7	673.8	651.4	636.6
75°	518.1	530.0	541.5	521.7	510.2
77.5°	396.0	406.1	414.0	401.4	390.2
80°	282.5	290.0	294.7	289.7	279.2
82.5°	181.6	187.0	189.5	189.2	182.3
85°	98.7	100.5	105.2	106.3	102.7
87.5°	38.2	40.7	41.8	45.0	41.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)