

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: P488718

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-3HI-40-120-EDD-90**

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: P488718
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-40-120-EDD-90
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

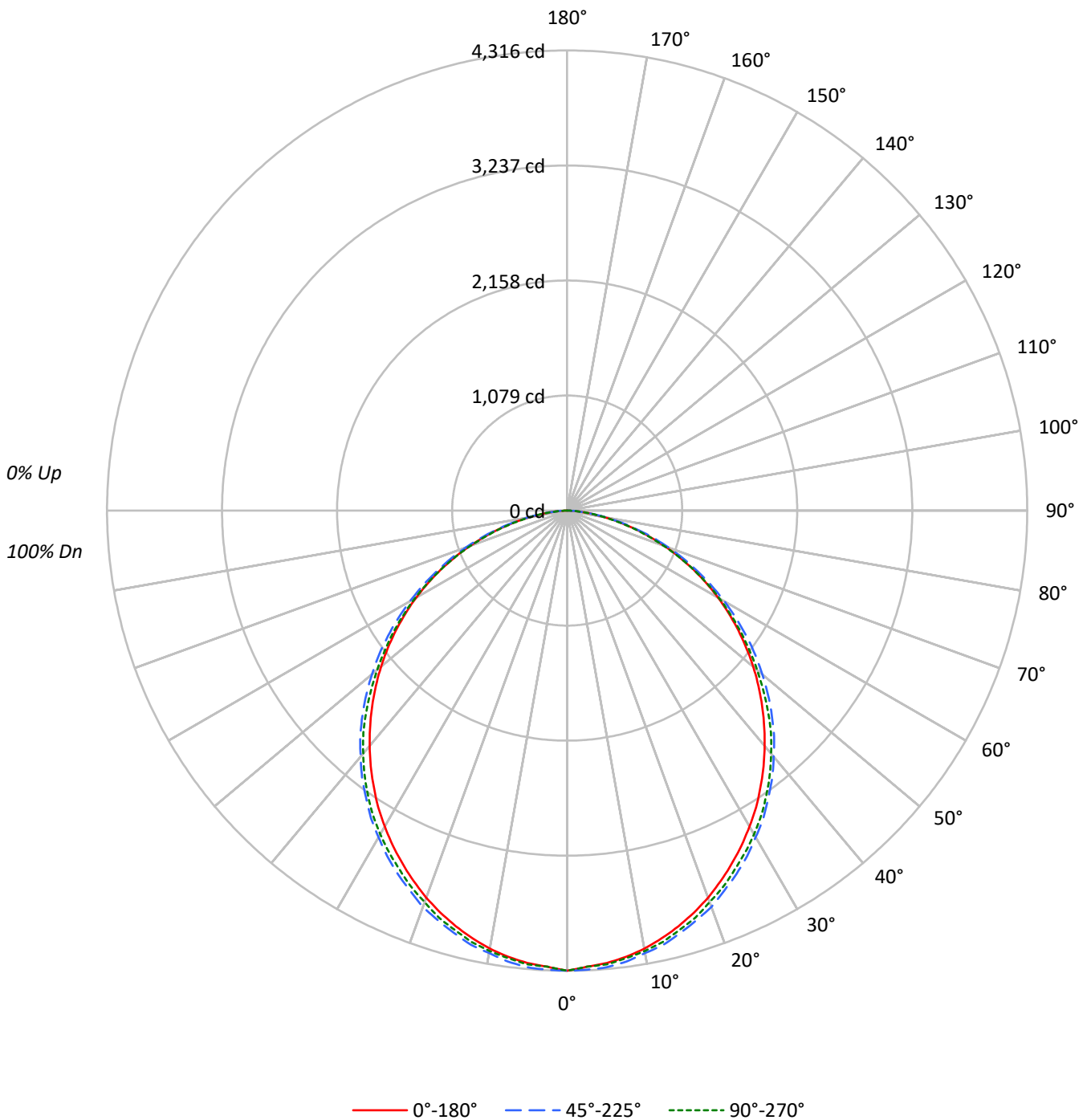
Lumens per Lamp: N/A
Luminaire Lumens: 11346.2 lumens
Efficiency: N/A
Efficacy: 87.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P488718

CATALOG NUMBER: CLM-12-4-INS-A19156-LD4-3HI-40-120-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P488718

CATALOG NUMBER: CLM-12-4-INS-A19156-LD4-3HI-40-120-EDD-90

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	109	105	100	97	106	102	98	95	98	95	92		94	92	89		91
2	99	91	85	79	97	90	83	78	86	81	76		83	78	75		80
3	91	80	72	66	88	79	71	65	76	70	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	48	75	63	54	48	61	53	48		59	52	47		57
6	71	58	49	42	69	57	48	42	55	47	42		53	47	41		52
7	66	52	44	38	64	51	43	37	50	43	37		49	42	37		47
8	61	48	39	34	60	47	39	33	46	38	33		45	38	33		43
9	57	44	36	30	56	43	35	30	42	35	30		41	35	30		40
10	54	41	33	27	52	40	32	27	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11613	11613	11613
5°	11506	11614	11542
10°	11401	11516	11461
15°	11243	11424	11344
20°	11066	11329	11192
25°	10850	11165	11037
30°	10631	10992	10891
35°	10392	10804	10703
40°	10121	10588	10453
45°	9838	10334	10139
50°	9542	10003	9741
55°	9195	9626	9331
60°	8804	9169	8886
65°	8297	8615	8303
70°	7634	7943	7549
75°	6723	7026	6620
80°	5463	5700	5401
85°	3804	4054	3955



TEST NUMBER: P488718

CATALOG NUMBER: CLM-12-4-INS-A19156-LD4-3HI-40-120-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	406.5	3.6
10°-20°	1151.8	10.2
20°-30°	1717.9	15.1
30°-40°	2035.7	17.9
40°-50°	2059.8	18.2
50°-60°	1798.9	15.9
60°-70°	1314.6	11.6
70°-80°	699.5	6.2
80°-90°	161.7	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°	3276.1	28.9
0°-40°	5311.8	46.8
0°-60°	9170.5	80.8
0°-90°	11346.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11346.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4316	4316	4316	4316	4316	
5°	4260	4268	4300	4309	4273	404
15°	4036	4062	4101	4126	4072	1138
25°	3654	3699	3760	3774	3717	1684
35°	3163	3213	3289	3312	3258	1978
45°	2585	2631	2715	2718	2664	1994
55°	1960	2000	2052	2022	1989	1752
65°	1303	1330	1353	1326	1304	1289
75°	647	661	676	651	637	687
85°	123	126	131	133	128	156
90°	0	0	0	0	0	



TEST NUMBER: P488718

CATALOG NUMBER: CLM-12-4-INS-A19156-LD4-3HI-40-120-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4315.7	4315.7	4315.7	4315.7	4315.7
2.5°	4282.0	4295.9	4310.3	4316.6	4281.5
5°	4259.5	4267.6	4299.5	4309.4	4273.0
7.5°	4222.6	4234.8	4265.8	4270.3	4235.2
10°	4172.3	4193.8	4214.5	4237.0	4194.3
12.5°	4108.0	4137.2	4172.3	4176.3	4143.9
15°	4035.6	4062.5	4100.8	4125.5	4072.0
17.5°	3954.6	3980.7	4030.2	4034.7	4002.3
20°	3864.2	3896.6	3956.0	3966.3	3908.3
22.5°	3761.7	3805.3	3854.8	3864.7	3822.0
25°	3654.3	3699.2	3760.4	3774.3	3717.2
27.5°	3541.9	3585.0	3653.8	3663.7	3615.6
30°	3421.3	3461.8	3537.4	3554.0	3505.0
32.5°	3299.0	3339.5	3423.1	3437.1	3389.4
35°	3163.3	3212.7	3288.7	3311.6	3258.1
37.5°	3024.8	3072.9	3159.2	3179.9	3122.3
40°	2881.3	2929.0	3014.0	3031.1	2975.7
42.5°	2734.7	2782.4	2873.2	2875.9	2830.1
45°	2585.0	2630.9	2715.4	2717.7	2664.1
47.5°	2433.0	2479.3	2554.9	2546.3	2496.0
50°	2279.2	2323.3	2389.4	2372.3	2326.9
52.5°	2120.1	2162.8	2225.3	2197.4	2154.7
55°	1960.0	1999.6	2051.7	2022.1	1988.8
57.5°	1798.6	1838.6	1878.6	1848.5	1819.7
60°	1635.8	1670.9	1703.7	1673.1	1651.1
62.5°	1470.3	1500.5	1528.8	1499.6	1478.9
65°	1303.1	1329.6	1353.0	1326.0	1304.0
67.5°	1136.7	1159.2	1180.8	1152.9	1130.0
70°	970.3	989.7	1009.5	980.7	959.5
72.5°	806.2	823.3	840.8	813.0	794.5
75°	646.6	661.4	675.8	651.1	636.7
77.5°	494.2	506.7	516.6	500.9	487.0
80°	352.5	362.0	367.8	361.5	348.5
82.5°	226.6	233.4	236.5	236.1	227.5
85°	123.2	125.5	131.3	132.6	128.1
87.5°	47.7	50.8	52.2	56.2	51.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)