

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: P488724

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-3LO-27-120-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: P488724
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-LD4-3LO-27-120-EDD-90
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

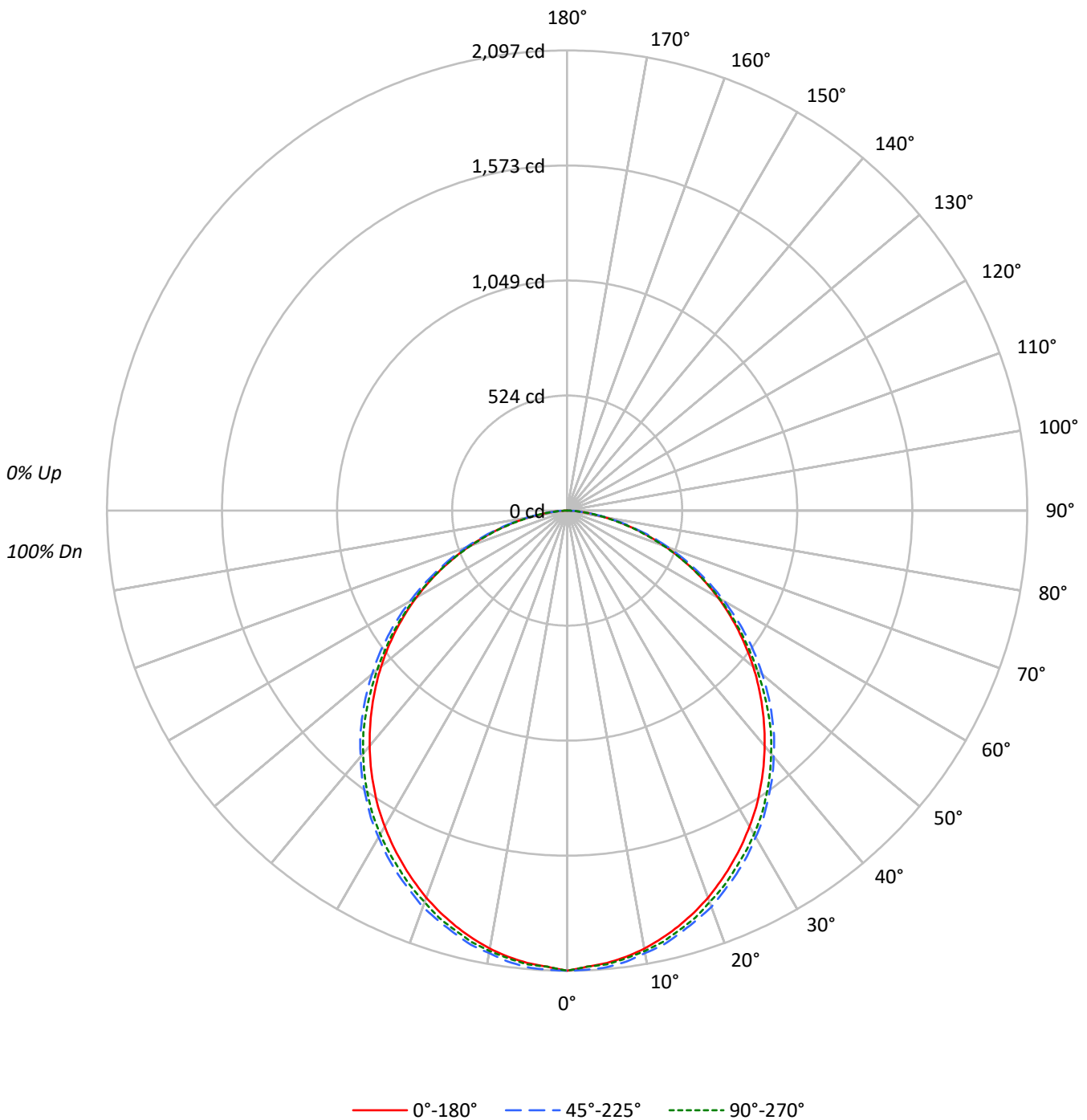
Lumens per Lamp: N/A
Luminaire Lumens: 5512.8 lumens
Efficiency: N/A
Efficacy: 78.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
Input Voltage (V): NR
Input Current (A_{in}): 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°	5643	5643	5643
5°	5591	5643	5608
10°	5539	5595	5569
15°	5463	5551	5512
20°	5377	5504	5438
25°	5272	5425	5363
30°	5165	5340	5292
35°	5049	5249	5200
40°	4918	5144	5079
45°	4780	5021	4926
50°	4636	4860	4733
55°	4468	4677	4533
60°	4278	4455	4317
65°	4031	4186	4034
70°	3710	3859	3668
75°	3267	3414	3217
80°	2655	2769	2624
85°	1849	1970	1924



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	197.5	3.6
10°-20°	559.6	10.2
20°-30°	834.7	15.1
30°-40°	989.1	17.9
40°-50°	1000.8	18.2
50°-60°	874.0	15.9
60°-70°	638.7	11.6
70°-80°	339.9	6.2
80°-90°	78.5	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°	1591.8	28.9
0°-40°	2580.8	46.8
0°-60°	4455.7	80.8
0°-90°	5512.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5512.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2097	2097	2097	2097	2097	
5°	2070	2074	2089	2094	2076	196
15°	1961	1974	1992	2004	1978	553
25°	1776	1797	1827	1834	1806	818
35°	1537	1561	1598	1609	1583	961
45°	1256	1278	1319	1320	1294	969
55°	952	972	997	982	966	851
65°	633	646	657	644	634	627
75°	314	321	328	316	309	334
85°	60	61	64	64	62	76
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2096.9	2096.9	2096.9	2096.9	2096.9
2.5°	2080.5	2087.3	2094.3	2097.3	2080.3
5°	2069.6	2073.5	2089.0	2093.8	2076.1
7.5°	2051.6	2057.5	2072.6	2074.8	2057.8
10°	2027.2	2037.7	2047.7	2058.6	2037.9
12.5°	1995.9	2010.1	2027.2	2029.1	2013.4
15°	1960.8	1973.9	1992.4	2004.5	1978.5
17.5°	1921.4	1934.1	1958.1	1960.3	1944.6
20°	1877.5	1893.3	1922.1	1927.1	1898.9
22.5°	1827.7	1848.9	1872.9	1877.7	1857.0
25°	1775.5	1797.4	1827.1	1833.8	1806.1
27.5°	1720.9	1741.9	1775.3	1780.1	1756.7
30°	1662.3	1682.0	1718.7	1726.8	1703.0
32.5°	1602.9	1622.6	1663.2	1670.0	1646.8
35°	1536.9	1561.0	1597.9	1609.0	1583.0
37.5°	1469.6	1493.0	1535.0	1545.0	1517.1
40°	1400.0	1423.1	1464.4	1472.7	1445.8
42.5°	1328.7	1351.9	1396.0	1397.3	1375.0
45°	1256.0	1278.3	1319.3	1320.4	1294.4
47.5°	1182.1	1204.6	1241.3	1237.2	1212.7
50°	1107.4	1128.8	1160.9	1152.6	1130.6
52.5°	1030.1	1050.8	1081.2	1067.7	1046.9
55°	952.3	971.5	996.9	982.5	966.3
57.5°	873.9	893.3	912.8	898.1	884.1
60°	794.8	811.8	827.8	812.9	802.2
62.5°	714.4	729.0	742.8	728.6	718.5
65°	633.1	646.0	657.4	644.3	633.6
67.5°	552.3	563.2	573.7	560.2	549.0
70°	471.5	480.9	490.5	476.5	466.2
72.5°	391.7	400.0	408.5	395.0	386.0
75°	314.2	321.4	328.4	316.3	309.4
77.5°	240.1	246.2	251.0	243.4	236.6
80°	171.3	175.9	178.7	175.6	169.3
82.5°	110.1	113.4	114.9	114.7	110.5
85°	59.9	61.0	63.8	64.4	62.3
87.5°	23.2	24.7	25.3	27.3	25.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)