

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: P489683

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-4HI-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: P489683
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-24-4-INS-A19156-LD4-4HI-20-120-EDD
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

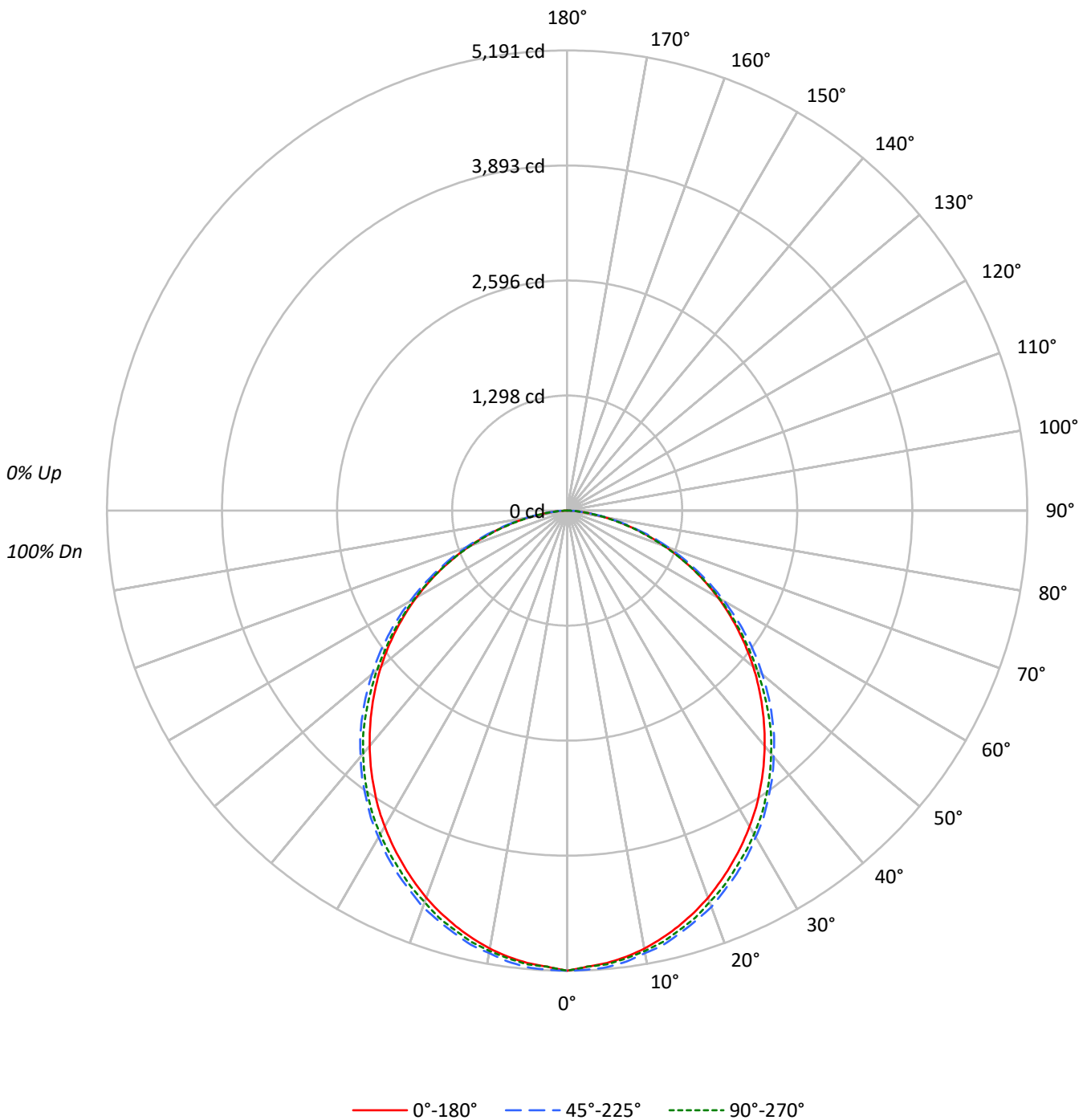
Lumens per Lamp: N/A
Luminaire Lumens: 13647.1 lumens
Efficiency: N/A
Efficacy: 79.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 172.8
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	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°	6984	6984	6984
5°	6920	6985	6942
10°	6856	6926	6892
15°	6761	6871	6822
20°	6655	6813	6731
25°	6525	6715	6638
30°	6394	6610	6550
35°	6249	6497	6437
40°	6087	6367	6287
45°	5916	6215	6097
50°	5739	6016	5858
55°	5530	5789	5611
60°	5295	5514	5344
65°	4990	5181	4993
70°	4591	4777	4540
75°	4043	4226	3981
80°	3285	3428	3247
85°	2288	2438	2379



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	488.9	3.6
10°-20°	1385.4	10.2
20°-30°	2066.2	15.1
30°-40°	2448.5	17.9
40°-50°	2477.5	18.2
50°-60°	2163.7	15.9
60°-70°	1581.2	11.6
70°-80°	841.3	6.2
80°-90°	194.4	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°	3940.5	28.9
0°-40°	6388.9	46.8
0°-60°	11030.2	80.8
0°-90°	13647.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13647.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5191	5191	5191	5191	5191	
5°	5123	5133	5171	5183	5140	486
15°	4854	4886	4932	4962	4898	1368
25°	4395	4449	4523	4540	4471	2025
35°	3805	3864	3956	3983	3919	2379
45°	3109	3164	3266	3269	3204	2399
55°	2358	2405	2468	2432	2392	2107
65°	1567	1599	1627	1595	1568	1551
75°	778	796	813	783	766	827
85°	148	151	158	160	154	188
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5190.9	5190.9	5190.9	5190.9	5190.9
2.5°	5150.3	5167.1	5184.4	5192.0	5149.8
5°	5123.3	5133.0	5171.4	5183.3	5139.5
7.5°	5078.9	5093.5	5130.8	5136.2	5094.1
10°	5018.3	5044.3	5069.2	5096.2	5044.8
12.5°	4941.0	4976.2	5018.3	5023.2	4984.3
15°	4853.9	4886.4	4932.4	4962.1	4897.7
17.5°	4756.6	4788.0	4847.4	4852.9	4813.9
20°	4647.9	4686.8	4758.2	4770.6	4700.9
22.5°	4524.6	4577.0	4636.5	4648.4	4597.0
25°	4395.3	4449.4	4522.9	4539.7	4471.0
27.5°	4260.1	4312.0	4394.8	4406.7	4348.8
30°	4115.2	4163.8	4254.7	4274.7	4215.8
32.5°	3968.1	4016.7	4117.3	4134.1	4076.8
35°	3804.7	3864.2	3955.6	3983.2	3918.8
37.5°	3638.2	3696.0	3799.9	3824.7	3755.5
40°	3465.6	3523.0	3625.2	3645.7	3579.2
42.5°	3289.3	3346.6	3455.9	3459.1	3404.0
45°	3109.2	3164.4	3266.1	3268.8	3204.4
47.5°	2926.4	2982.1	3073.0	3062.7	3002.1
50°	2741.5	2794.5	2874.0	2853.4	2798.8
52.5°	2550.0	2601.4	2676.6	2643.0	2591.6
55°	2357.5	2405.1	2467.8	2432.1	2392.1
57.5°	2163.3	2211.4	2259.6	2223.3	2188.7
60°	1967.5	2009.7	2049.2	2012.4	1985.9
62.5°	1768.5	1804.7	1838.8	1803.7	1778.8
65°	1567.3	1599.2	1627.4	1594.9	1568.4
67.5°	1367.2	1394.3	1420.2	1386.7	1359.1
70°	1167.1	1190.4	1214.2	1179.5	1154.1
72.5°	969.7	990.3	1011.3	977.8	955.6
75°	777.7	795.6	812.9	783.1	765.8
77.5°	594.4	609.5	621.4	602.5	585.7
80°	424.0	435.4	442.4	434.8	419.1
82.5°	272.6	280.7	284.5	283.9	273.7
85°	148.2	150.9	157.9	159.5	154.1
87.5°	57.3	61.1	62.7	67.6	62.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)