

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: P489716

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-4STD-50-120-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: P489716  
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-LD4-4STD-50-120-EDD-90  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

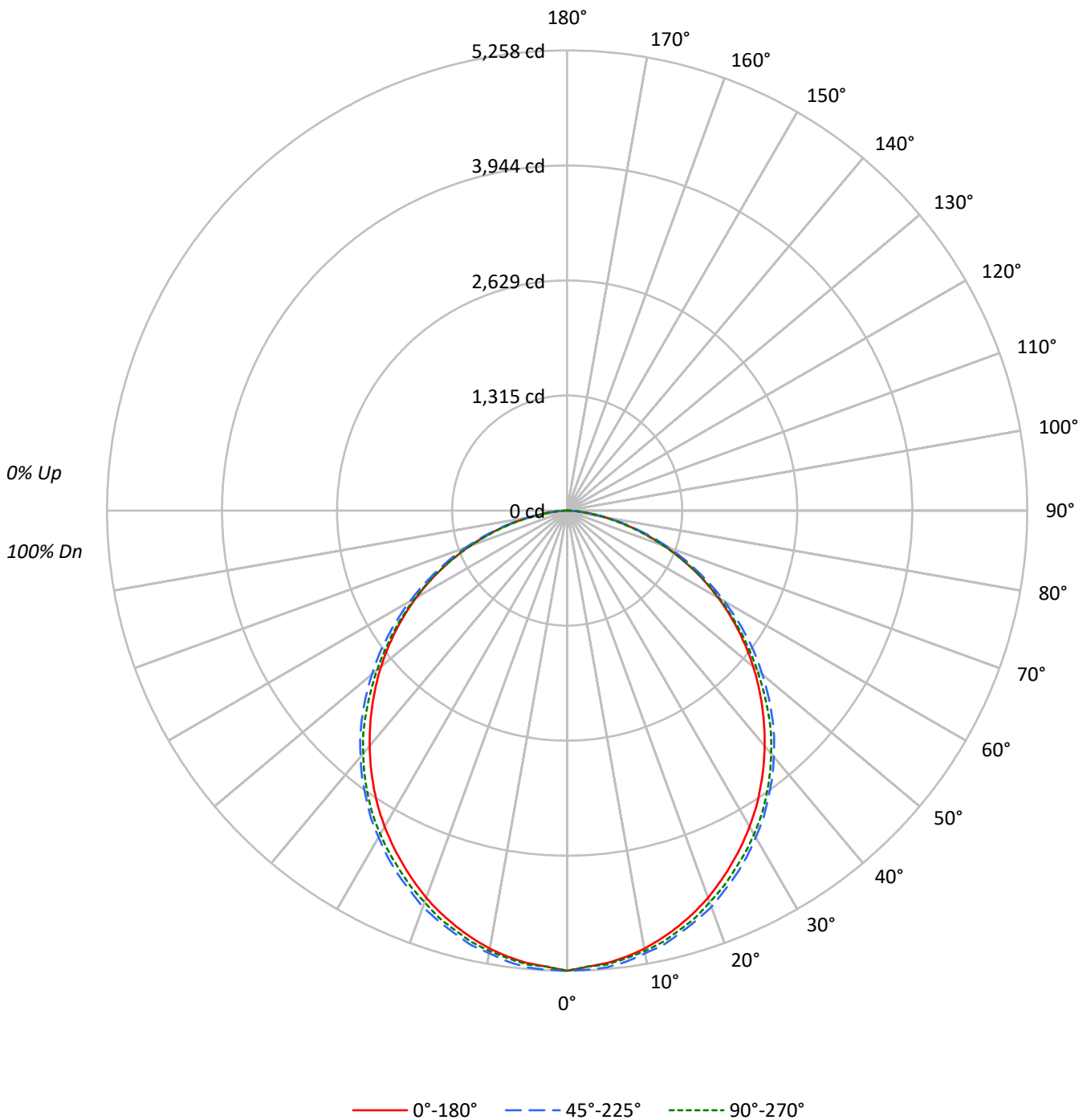
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13824.2 lumens  
Efficiency: N/A  
Efficacy: 103.8 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): 133.2  
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°	7075	7075	7075
5°	7009	7075	7032
10°	6945	7016	6982
15°	6849	6960	6911
20°	6741	6901	6818
25°	6610	6802	6724
30°	6476	6696	6635
35°	6331	6582	6520
40°	6166	6450	6368
45°	5993	6295	6177
50°	5813	6094	5934
55°	5602	5864	5684
60°	5363	5586	5413
65°	5055	5248	5058
70°	4651	4838	4599
75°	4095	4281	4033
80°	3328	3472	3290
85°	2317	2470	2410



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	495.2	3.6
10°-20°	1403.4	10.2
20°-30°	2093.0	15.1
30°-40°	2480.3	17.9
40°-50°	2509.6	18.2
50°-60°	2191.8	15.9
60°-70°	1601.7	11.6
70°-80°	852.2	6.2
80°-90°	197.0	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°	3991.6	28.9
0°-40°	6471.9	46.8
0°-60°	11173.3	80.8
0°-90°	13824.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13824.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5258	5258	5258	5258	5258	
5°	5190	5200	5238	5251	5206	492
15°	4917	4950	4996	5026	4961	1386
25°	4452	4507	4582	4599	4529	2051
35°	3854	3914	4007	4035	3970	2410
45°	3150	3206	3308	3311	3246	2430
55°	2388	2436	2500	2464	2423	2135
65°	1588	1620	1648	1616	1589	1571
75°	788	806	823	793	776	838
85°	150	153	160	162	156	190
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5258.2	5258.2	5258.2	5258.2	5258.2
2.5°	5217.1	5234.1	5251.7	5259.3	5216.6
5°	5189.8	5199.6	5238.5	5250.6	5206.2
7.5°	5144.8	5159.6	5197.4	5202.9	5160.2
10°	5083.5	5109.8	5135.0	5162.4	5110.3
12.5°	5005.1	5040.7	5083.5	5088.4	5049.0
15°	4916.9	4949.8	4996.4	5026.5	4961.3
17.5°	4818.3	4850.1	4910.4	4915.8	4876.4
20°	4708.2	4747.6	4820.0	4832.6	4761.9
22.5°	4583.3	4636.4	4696.7	4708.7	4656.7
25°	4452.4	4507.1	4581.6	4598.6	4529.0
27.5°	4315.4	4368.0	4451.8	4463.9	4405.2
30°	4168.6	4217.9	4309.9	4330.2	4270.5
32.5°	4019.6	4068.9	4170.8	4187.7	4129.7
35°	3854.1	3914.4	4007.0	4034.9	3969.7
37.5°	3685.4	3744.0	3849.2	3874.4	3804.2
40°	3510.6	3568.7	3672.2	3693.0	3625.7
42.5°	3332.0	3390.1	3500.7	3504.0	3448.1
45°	3149.6	3205.5	3308.4	3311.2	3246.0
47.5°	2964.4	3020.8	3112.9	3102.5	3041.1
50°	2777.0	2830.7	2911.3	2890.4	2835.1
52.5°	2583.1	2635.1	2711.3	2677.3	2625.3
55°	2388.1	2436.3	2499.8	2463.7	2423.1
57.5°	2191.4	2240.1	2288.9	2252.2	2217.1
60°	1993.1	2035.8	2075.8	2038.5	2011.7
62.5°	1791.5	1828.2	1862.7	1827.1	1801.9
65°	1587.7	1620.0	1648.5	1615.6	1588.8
67.5°	1385.0	1412.3	1438.6	1404.7	1376.7
70°	1182.3	1205.8	1229.9	1194.9	1169.1
72.5°	982.3	1003.1	1024.5	990.5	968.0
75°	787.8	805.9	823.4	793.3	775.8
77.5°	602.1	617.4	629.5	610.3	593.3
80°	429.5	441.0	448.1	440.5	424.6
82.5°	276.1	284.3	288.2	287.6	277.2
85°	150.1	152.8	160.0	161.6	156.1
87.5°	58.1	61.9	63.6	68.5	63.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)