

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: P488655

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-1LO-30-120-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: P488655  
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-LD4-1LO-30-120-EDD  
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

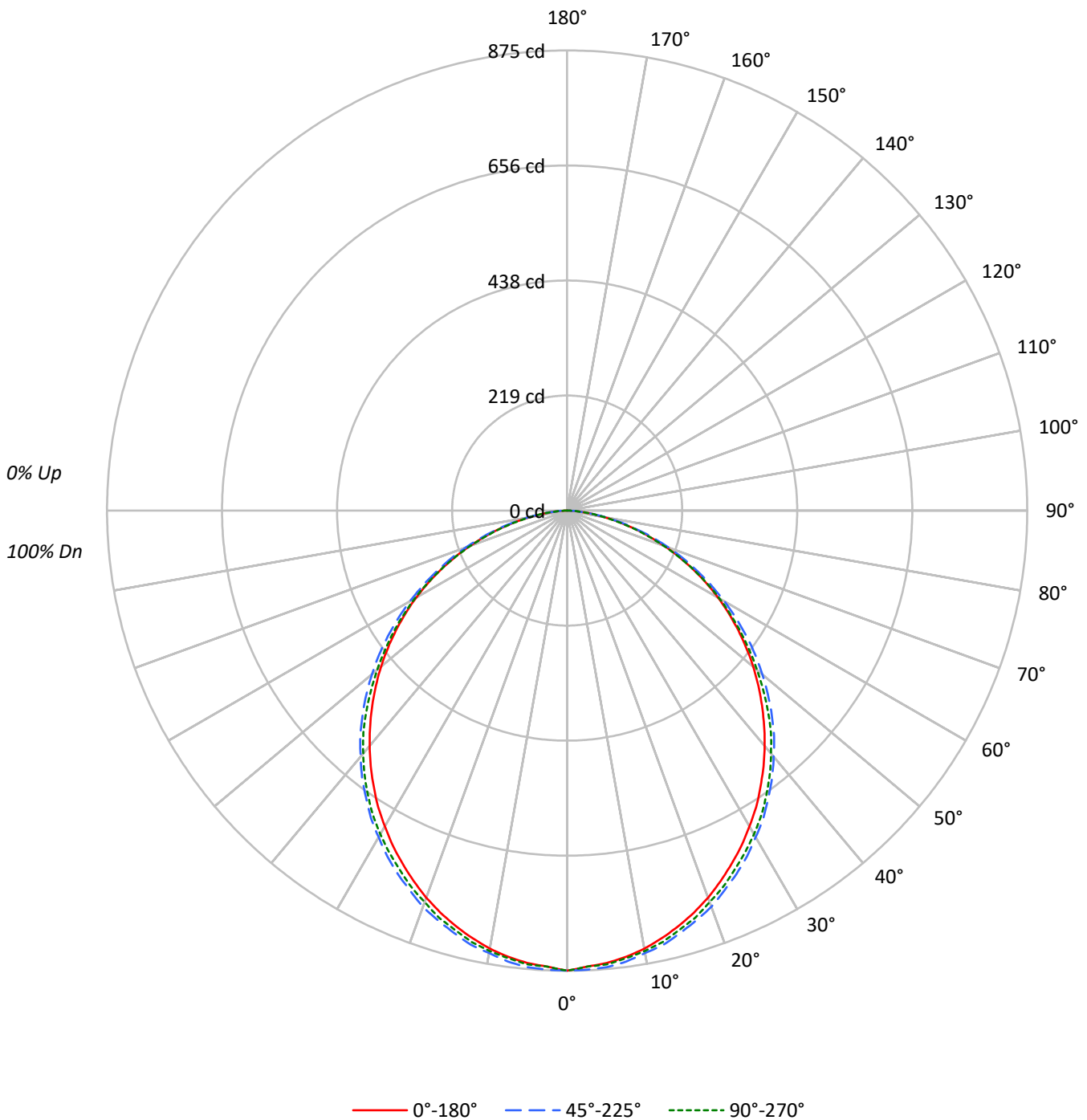
Lumens per Lamp: N/A  
Luminaire Lumens: 2300.0 lumens  
Efficiency: N/A  
Efficacy: 98.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
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°	2354	2354	2354
5°	2332	2354	2340
10°	2311	2334	2323
15°	2279	2316	2299
20°	2243	2296	2269
25°	2200	2263	2237
30°	2155	2228	2208
35°	2106	2190	2170
40°	2052	2146	2119
45°	1994	2095	2055
50°	1934	2028	1975
55°	1864	1951	1891
60°	1785	1859	1801
65°	1682	1747	1683
70°	1548	1610	1530
75°	1363	1424	1342
80°	1108	1156	1094
85°	772	821	803



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	82.4	3.6
10°-20°	233.5	10.2
20°-30°	348.2	15.1
30°-40°	412.7	17.9
40°-50°	417.5	18.2
50°-60°	364.7	15.9
60°-70°	266.5	11.6
70°-80°	141.8	6.2
80°-90°	32.8	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°	664.1	28.9
0°-40°	1076.8	46.8
0°-60°	1859.0	80.8
0°-90°	2300.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2300.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	875	875	875	875	875	
5°	863	865	872	874	866	82
15°	818	824	831	836	825	231
25°	741	750	762	765	754	341
35°	641	651	667	671	660	401
45°	524	533	550	551	540	404
55°	397	405	416	410	403	355
65°	264	270	274	269	264	261
75°	131	134	137	132	129	139
85°	25	25	27	27	26	32
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	874.8	874.8	874.8	874.8	874.8
2.5°	868.0	870.8	873.7	875.0	867.9
5°	863.4	865.1	871.6	873.6	866.2
7.5°	856.0	858.4	864.7	865.6	858.5
10°	845.8	850.1	854.3	858.9	850.2
12.5°	832.7	838.7	845.8	846.6	840.0
15°	818.1	823.5	831.3	836.3	825.4
17.5°	801.6	806.9	817.0	817.9	811.3
20°	783.3	789.9	801.9	804.0	792.3
22.5°	762.5	771.4	781.4	783.4	774.8
25°	740.8	749.9	762.3	765.1	753.5
27.5°	718.0	726.7	740.7	742.7	732.9
30°	693.5	701.7	717.1	720.4	710.5
32.5°	668.8	677.0	693.9	696.7	687.1
35°	641.2	651.3	666.7	671.3	660.5
37.5°	613.2	622.9	640.4	644.6	632.9
40°	584.1	593.7	611.0	614.4	603.2
42.5°	554.4	564.0	582.4	583.0	573.7
45°	524.0	533.3	550.4	550.9	540.1
47.5°	493.2	502.6	517.9	516.2	506.0
50°	462.0	471.0	484.4	480.9	471.7
52.5°	429.8	438.4	451.1	445.4	436.8
55°	397.3	405.3	415.9	409.9	403.1
57.5°	364.6	372.7	380.8	374.7	368.9
60°	331.6	338.7	345.4	339.2	334.7
62.5°	298.1	304.2	309.9	304.0	299.8
65°	264.1	269.5	274.3	268.8	264.3
67.5°	230.4	235.0	239.4	233.7	229.1
70°	196.7	200.6	204.6	198.8	194.5
72.5°	163.4	166.9	170.4	164.8	161.1
75°	131.1	134.1	137.0	132.0	129.1
77.5°	100.2	102.7	104.7	101.5	98.7
80°	71.5	73.4	74.6	73.3	70.6
82.5°	45.9	47.3	47.9	47.9	46.1
85°	25.0	25.4	26.6	26.9	26.0
87.5°	9.7	10.3	10.6	11.4	10.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)