

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: P488722

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-3LO-20-120-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: P488722  
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-20-120-EDD-90  
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

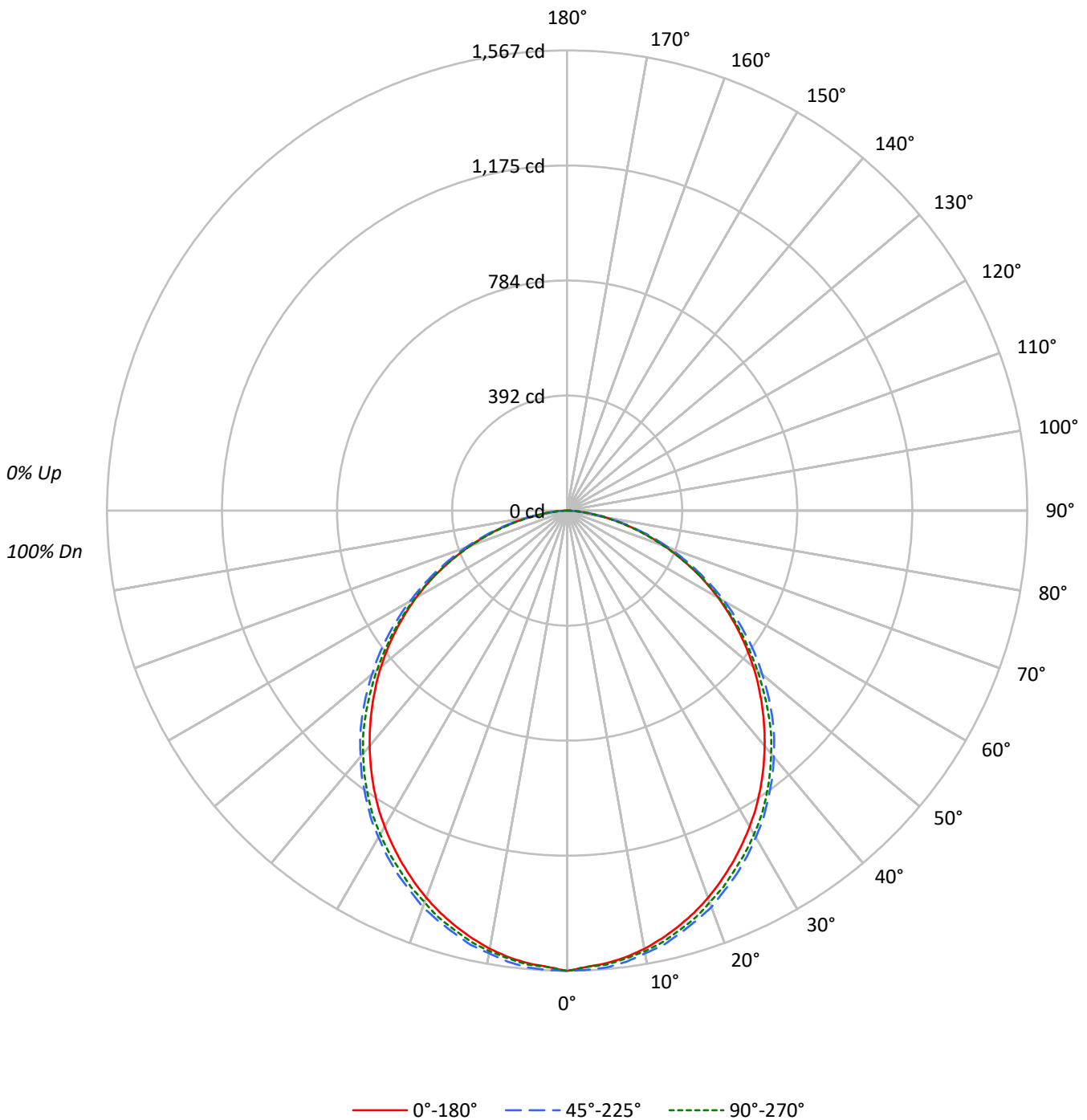
Lumens per Lamp: N/A  
Luminaire Lumens: 4120.7 lumens  
Efficiency: N/A  
Efficacy: 58.7 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 70.2  
Input Voltage (V): NR  
Input Current (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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	109	105	100	97	106	102	98	95	98	95	92	94	92	89	91	88	87	85					85			
2	99	91	85	79	97	90	83	78	86	81	76	83	78	75	80	76	73	71					71			
3	91	80	72	66	88	79	71	65	76	70	64	73	68	63	71	66	62	60					60			
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51					51			
5	77	64	55	48	75	63	54	48	61	53	48	59	52	47	57	51	47	45					45			
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39					39			
7	66	52	44	38	64	51	43	37	50	43	37	49	42	37	47	41	37	35					35			
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31					31			
9	57	44	36	30	56	43	35	30	42	35	30	41	35	30	40	34	30	28					28			
10	54	41	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25					25			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	4218	4218	4218
5°	4179	4218	4192
10°	4141	4182	4162
15°	4083	4149	4120
20°	4019	4114	4065
25°	3941	4055	4008
30°	3861	3992	3955
35°	3774	3924	3887
40°	3676	3845	3796
45°	3573	3753	3682
50°	3466	3633	3538
55°	3339	3496	3389
60°	3197	3330	3227
65°	3013	3129	3016
70°	2773	2884	2742
75°	2441	2551	2404
80°	1984	2070	1962
85°	1380	1473	1436



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	147.6	3.6
10°-20°	418.3	10.2
20°-30°	623.9	15.1
30°-40°	739.3	17.9
40°-50°	748.1	18.2
50°-60°	653.3	15.9
60°-70°	477.4	11.6
70°-80°	254.0	6.2
80°-90°	58.7	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°	1189.8	28.9
0°-40°	1929.1	46.8
0°-60°	3330.5	80.8
0°-90°	4120.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4120.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1567	1567	1567	1567	1567	
5°	1547	1550	1562	1565	1552	147
15°	1466	1475	1489	1498	1479	413
25°	1327	1344	1366	1371	1350	611
35°	1149	1167	1194	1203	1183	718
45°	939	956	986	987	968	724
55°	712	726	745	734	722	636
65°	473	483	491	482	474	468
75°	235	240	245	236	231	250
85°	45	46	48	48	46	57
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1567.4	1567.4	1567.4	1567.4	1567.4
2.5°	1555.1	1560.2	1565.4	1567.7	1555.0
5°	1547.0	1549.9	1561.5	1565.1	1551.9
7.5°	1533.6	1538.0	1549.2	1550.9	1538.1
10°	1515.3	1523.1	1530.6	1538.8	1523.3
12.5°	1491.9	1502.5	1515.3	1516.7	1505.0
15°	1465.6	1475.4	1489.3	1498.3	1478.9
17.5°	1436.2	1445.7	1463.7	1465.3	1453.5
20°	1403.4	1415.2	1436.7	1440.5	1419.4
22.5°	1366.2	1382.0	1400.0	1403.6	1388.1
25°	1327.2	1343.5	1365.7	1370.8	1350.0
27.5°	1286.3	1302.0	1327.0	1330.6	1313.1
30°	1242.6	1257.3	1284.7	1290.7	1272.9
32.5°	1198.1	1212.8	1243.2	1248.3	1231.0
35°	1148.8	1166.8	1194.4	1202.7	1183.3
37.5°	1098.5	1116.0	1147.4	1154.9	1134.0
40°	1046.4	1063.7	1094.6	1100.8	1080.7
42.5°	993.2	1010.5	1043.5	1044.5	1027.8
45°	938.8	955.5	986.2	987.0	967.6
47.5°	883.6	900.4	927.9	924.8	906.5
50°	827.8	843.8	867.8	861.6	845.1
52.5°	770.0	785.5	808.2	798.1	782.5
55°	711.8	726.2	745.1	734.4	722.3
57.5°	653.2	667.7	682.3	671.3	660.9
60°	594.1	606.8	618.7	607.6	599.6
62.5°	534.0	544.9	555.2	544.6	537.1
65°	473.2	482.9	491.4	481.6	473.6
67.5°	412.8	421.0	428.8	418.7	410.4
70°	352.4	359.4	366.6	356.2	348.5
72.5°	292.8	299.0	305.4	295.2	288.6
75°	234.8	240.2	245.4	236.5	231.2
77.5°	179.5	184.0	187.6	181.9	176.9
80°	128.0	131.5	133.6	131.3	126.6
82.5°	82.3	84.8	85.9	85.7	82.6
85°	44.7	45.6	47.7	48.2	46.5
87.5°	17.3	18.5	18.9	20.4	18.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)