

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: P310911

Luminaire Tested: **24FCZ2-50-UNV-L82765-CA125-W2A-U-5700K**

Issue Date: 3/3/2020

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: P310911
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-50-UNV-L82765-CA125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 5700K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4751.0 lumens
Efficiency: N/A
Efficacy: 108.2 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

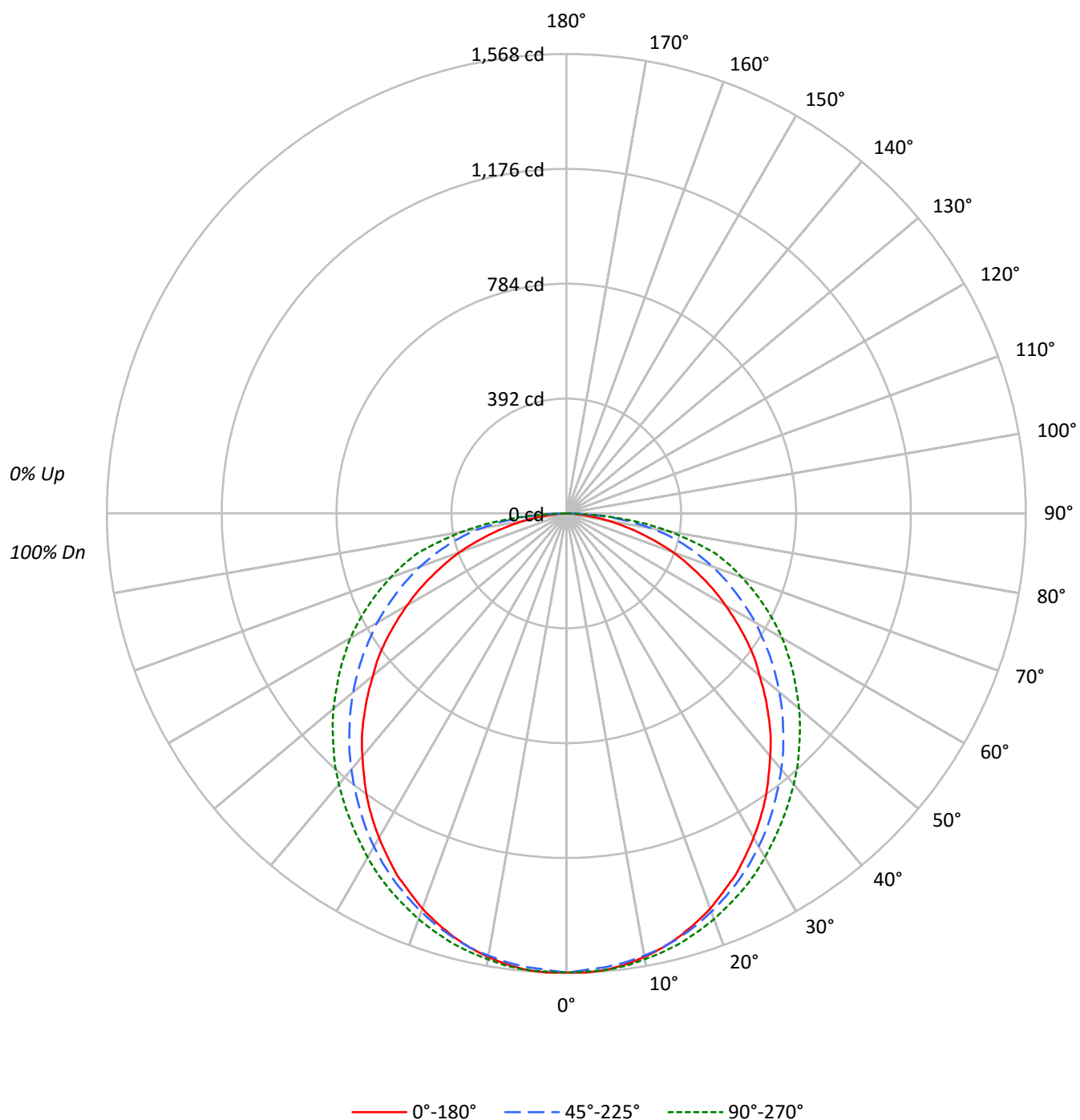
Input Watts (W): 43.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2108	2108	2108
5°	2112	2099	2112
10°	2100	2093	2111
15°	2081	2086	2112
20°	2056	2072	2110
25°	2024	2057	2108
30°	1986	2040	2106
35°	1947	2020	2108
40°	1902	2004	2121
45°	1857	1992	2139
50°	1802	1986	2171
55°	1756	1989	2215
60°	1688	2006	2291
65°	1611	2027	2374
70°	1526	2090	2505
75°	1360	2180	2737
80°	1160	2308	2797
85°	827	2288	2677



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.3	3.1
10°-20°	424.0	8.9
20°-30°	640.4	13.5
30°-40°	771.8	16.2
40°-50°	810.3	17.1
50°-60°	758.1	16.0
60°-70°	626.0	13.2
70°-80°	426.6	9.0
80°-90°	145.5	3.1
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°	1212.7	25.5
0°-40°	1984.5	41.8
0°-60°	3552.9	74.8
0°-90°	4751.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4751.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1567	1567	1567	1567	1567	
5°	1564	1562	1554	1564	1564	148
15°	1494	1496	1498	1513	1516	421
25°	1364	1370	1386	1412	1420	627
35°	1185	1198	1230	1270	1283	741
45°	976	996	1047	1103	1124	753
55°	749	779	848	917	944	668
65°	506	549	637	717	746	502
75°	262	322	419	498	526	279
85°	54	106	148	167	173	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1566.8	1566.8	1566.8	1566.8	1566.8
2.5°	1568.4	1566.8	1559.0	1566.8	1565.3
5°	1563.7	1562.1	1554.2	1563.7	1563.7
7.5°	1552.7	1552.7	1544.8	1555.8	1557.4
10°	1536.9	1536.9	1532.2	1544.8	1544.8
12.5°	1518.0	1518.0	1518.0	1530.6	1532.2
15°	1494.3	1495.9	1497.5	1513.2	1516.4
17.5°	1466.0	1469.1	1473.8	1492.8	1495.9
20°	1436.0	1439.2	1447.0	1469.1	1473.8
22.5°	1398.2	1406.1	1417.1	1442.3	1447.0
25°	1363.5	1369.8	1385.6	1412.4	1420.2
27.5°	1320.9	1330.4	1350.9	1379.3	1390.3
30°	1278.4	1287.8	1313.1	1346.2	1355.6
32.5°	1232.7	1246.9	1273.6	1308.3	1319.4
35°	1185.4	1198.0	1229.5	1270.5	1283.1
37.5°	1133.4	1150.7	1185.4	1229.5	1245.3
40°	1082.9	1101.8	1141.2	1188.5	1207.4
42.5°	1032.5	1051.4	1095.5	1149.1	1168.0
45°	975.7	996.2	1046.7	1103.4	1123.9
47.5°	919.0	944.2	999.4	1059.3	1081.3
50°	860.7	889.0	948.9	1012.0	1037.2
52.5°	808.6	835.4	898.5	966.3	989.9
55°	748.7	778.7	848.0	917.4	944.2
57.5°	687.3	720.4	794.5	870.1	896.9
60°	627.4	663.6	745.6	821.3	851.2
62.5°	569.0	605.3	690.4	769.2	799.2
65°	506.0	548.6	636.8	717.2	745.6
67.5°	446.1	491.8	584.8	663.6	692.0
70°	387.8	431.9	531.2	608.5	636.8
72.5°	324.7	375.2	474.5	554.9	584.8
75°	261.7	321.6	419.3	498.1	526.5
77.5°	203.3	264.8	362.5	427.2	441.4
80°	149.7	212.8	297.9	343.6	361.0
82.5°	96.2	159.2	227.0	260.1	274.3
85°	53.6	105.6	148.2	167.1	173.4
87.5°	22.1	45.7	59.9	67.8	67.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)