

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: P311586

Luminaire Tested: **24FCZ2-50-UNV-L82765-S-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: P311586
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
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-S-CA125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH 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: 4992.0 lumens
Efficiency: N/A
Efficacy: 113.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

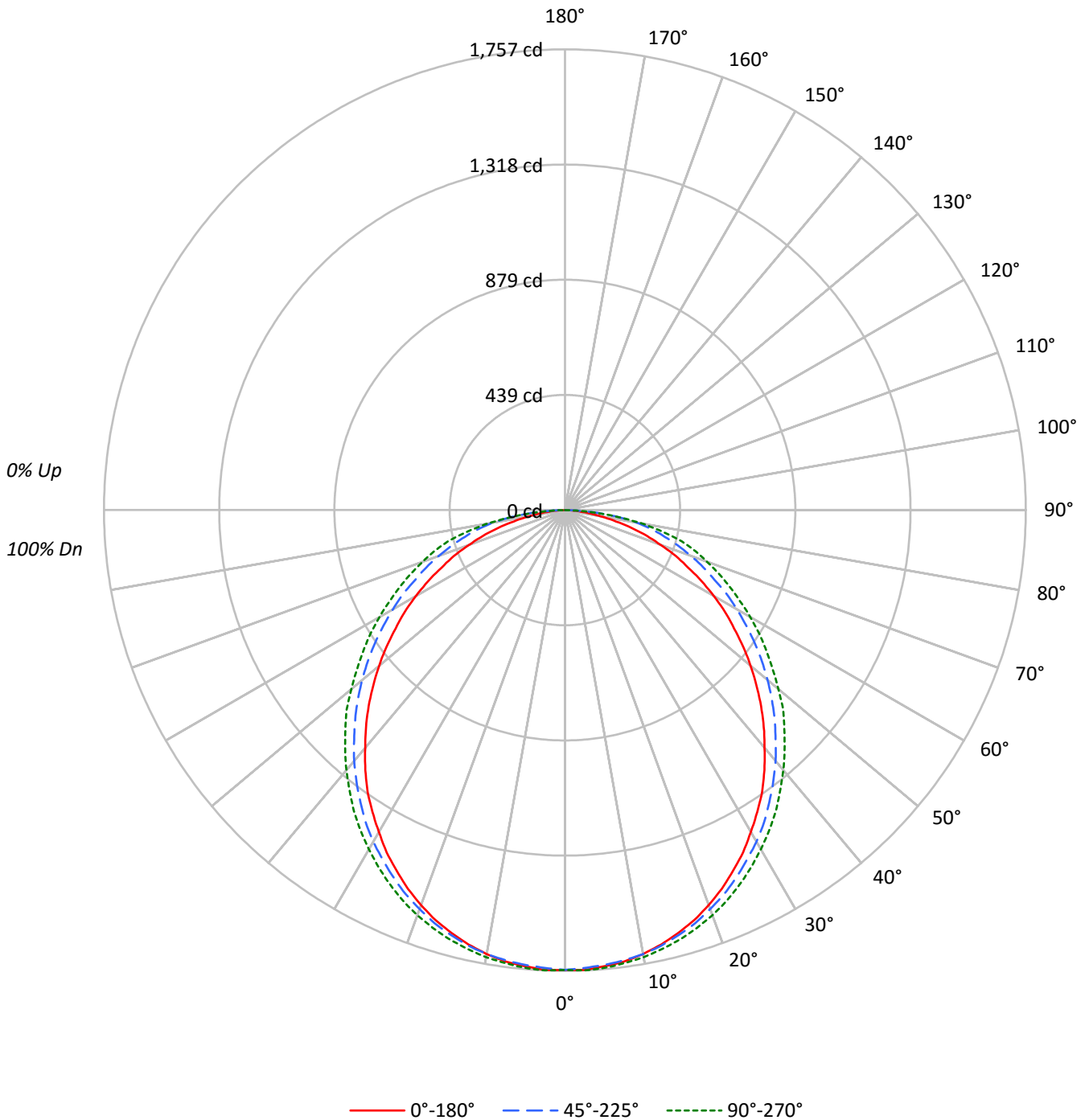
Input Watts (W): 43.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2360	2360	2360
5°	2358	2351	2366
10°	2348	2348	2366
15°	2326	2337	2361
20°	2295	2318	2354
25°	2253	2295	2340
30°	2202	2269	2321
35°	2154	2232	2302
40°	2080	2195	2275
45°	2012	2151	2251
50°	1935	2111	2224
55°	1849	2072	2202
60°	1762	2039	2197
65°	1651	2004	2211
70°	1528	2015	2271
75°	1368	2052	2399
80°	1106	2175	2347
85°	832	1910	1860



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	166.0	3.3
10°-20°	474.4	9.5
20°-30°	713.1	14.3
30°-40°	849.4	17.0
40°-50°	869.4	17.4
50°-60°	782.7	15.7
60°-70°	614.7	12.3
70°-80°	398.9	8.0
80°-90°	123.4	2.5
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°	1353.5	27.1
0°-40°	2203.0	44.1
0°-60°	3855.0	77.2
0°-90°	4992.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4992.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1754	1754	1754	1754	1754	
5°	1746	1749	1741	1751	1752	166
15°	1670	1674	1678	1692	1695	471
25°	1518	1530	1546	1571	1576	699
35°	1311	1327	1359	1392	1402	818
45°	1058	1083	1131	1173	1183	815
55°	788	823	883	929	939	706
65°	518	558	630	682	694	516
75°	263	314	395	449	461	279
85°	54	100	124	120	120	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1753.7	1753.7	1753.7	1753.7	1753.7
2.5°	1755.3	1755.3	1747.4	1755.3	1756.9
5°	1745.8	1749.0	1741.0	1750.6	1752.1
7.5°	1736.3	1736.3	1731.5	1741.0	1742.6
10°	1718.8	1720.4	1718.8	1729.9	1731.5
12.5°	1696.6	1699.8	1701.4	1712.5	1714.1
15°	1669.7	1674.4	1677.6	1691.9	1695.1
17.5°	1639.6	1644.3	1652.2	1668.1	1671.3
20°	1603.1	1609.4	1618.9	1639.6	1644.3
22.5°	1563.4	1569.8	1585.6	1604.7	1612.6
25°	1517.5	1530.1	1546.0	1571.4	1576.1
27.5°	1471.5	1482.6	1503.2	1530.1	1536.5
30°	1417.6	1435.0	1460.4	1487.3	1493.7
32.5°	1365.2	1382.7	1412.8	1441.4	1449.3
35°	1311.3	1327.2	1358.9	1392.2	1401.7
37.5°	1249.5	1270.1	1305.0	1338.3	1347.8
40°	1184.5	1209.8	1249.5	1284.4	1295.5
42.5°	1122.6	1149.6	1189.2	1227.3	1240.0
45°	1057.6	1083.0	1130.6	1173.4	1182.9
47.5°	991.0	1019.6	1070.3	1113.1	1129.0
50°	924.4	954.6	1008.5	1052.9	1062.4
52.5°	857.8	889.5	946.6	994.2	999.0
55°	788.1	822.9	883.2	929.2	938.7
57.5°	724.6	754.8	819.8	867.3	878.4
60°	654.9	688.2	757.9	802.3	816.6
62.5°	588.3	623.2	696.1	740.5	753.2
65°	518.5	558.1	629.5	681.8	694.5
67.5°	458.3	496.3	572.4	623.2	635.8
70°	388.5	431.3	512.2	564.5	577.2
72.5°	328.2	372.6	453.5	504.2	523.3
75°	263.2	314.0	394.8	448.7	461.4
77.5°	199.8	258.5	340.9	382.1	382.1
80°	142.7	204.5	280.7	299.7	302.9
82.5°	93.6	153.8	207.7	206.1	206.1
85°	53.9	99.9	123.7	120.5	120.5
87.5°	20.6	41.2	44.4	44.4	42.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)