

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: P311596

Luminaire Tested: **24FCZ2-50-UNV-L82765-S-CP125-W2A-U-6500K**

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: P311596
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-CP125-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (168) 6500K 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: 4907.0 lumens
Efficiency: N/A
Efficacy: 110.0 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

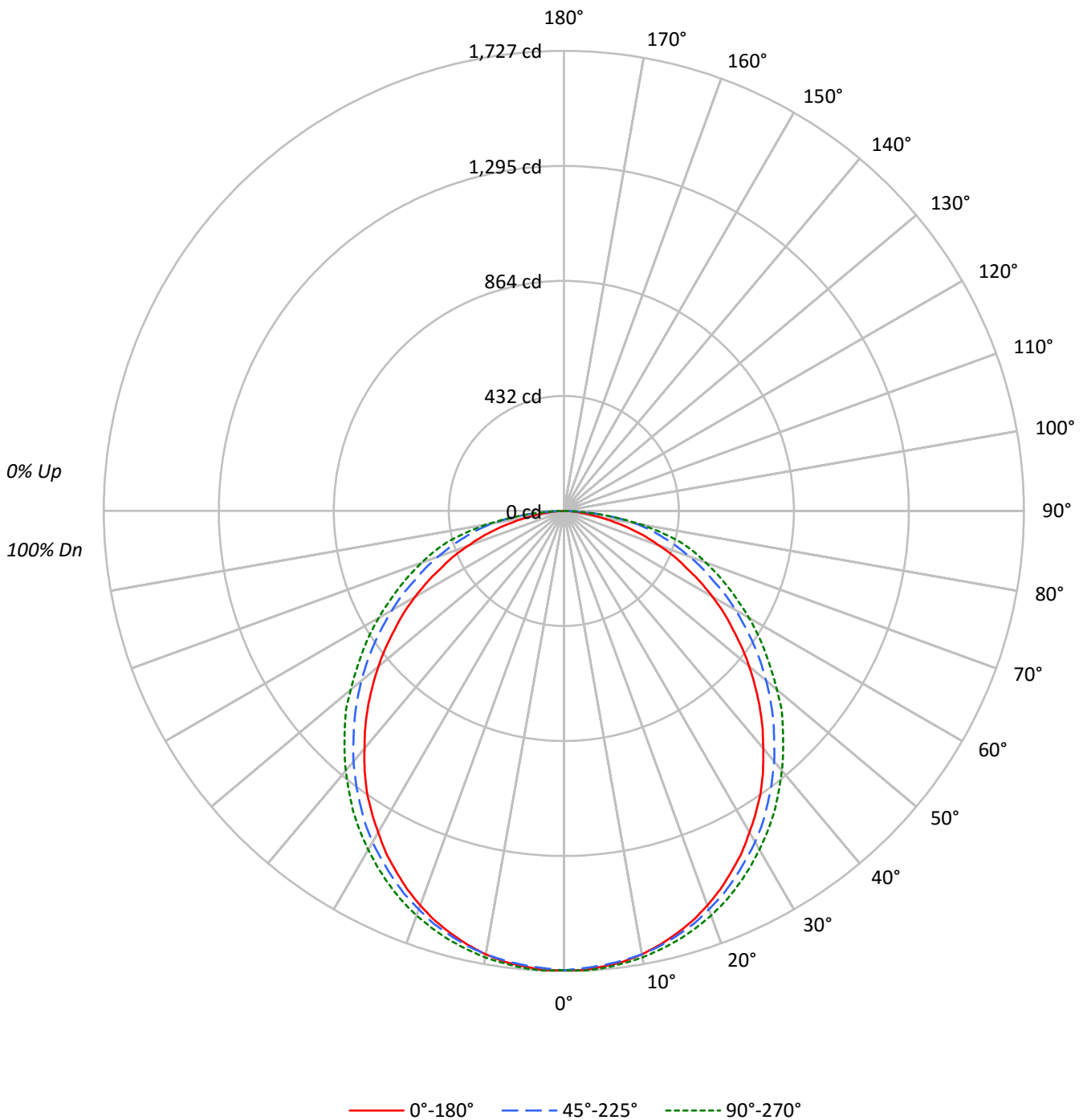
Input Watts (W): 44.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P311596

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-S-CP125-W2A-U-6500K

Luminous Intensity Polar Plot





TEST NUMBER: P311596

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-S-CP125-W2A-U-6500K

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°	2319	2319	2319
5°	2318	2311	2326
10°	2308	2308	2325
15°	2286	2297	2321
20°	2256	2279	2314
25°	2214	2256	2300
30°	2165	2230	2281
35°	2117	2194	2263
40°	2045	2157	2237
45°	1978	2115	2212
50°	1902	2075	2186
55°	1817	2037	2164
60°	1732	2005	2160
65°	1623	1970	2174
70°	1502	1980	2232
75°	1345	2018	2358
80°	1087	2138	2307
85°	818	1877	1829



TEST NUMBER: P311596

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-S-CP125-W2A-U-6500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.2	3.3
10°-20°	466.3	9.5
20°-30°	701.0	14.3
30°-40°	835.0	17.0
40°-50°	854.6	17.4
50°-60°	769.4	15.7
60°-70°	604.2	12.3
70°-80°	392.1	8.0
80°-90°	121.3	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°	1330.5	27.1
0°-40°	2165.5	44.1
0°-60°	3789.4	77.2
0°-90°	4907.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4907.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1724	1724	1724	1724	1724	
5°	1716	1719	1711	1721	1722	163
15°	1641	1646	1649	1663	1666	463
25°	1492	1504	1520	1545	1549	687
35°	1289	1305	1336	1368	1378	804
45°	1040	1065	1111	1153	1163	802
55°	775	809	868	913	923	694
65°	510	549	619	670	683	507
75°	259	309	388	441	454	274
85°	53	98	122	118	118	64
90°	0	0	0	0	0	



TEST NUMBER: P311596

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-S-CP125-W2A-U-6500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1723.9	1723.9	1723.9	1723.9	1723.9
2.5°	1725.4	1725.4	1717.6	1725.4	1727.0
5°	1716.1	1719.2	1711.4	1720.7	1722.3
7.5°	1706.7	1706.7	1702.0	1711.4	1713.0
10°	1689.6	1691.1	1689.6	1700.5	1702.0
12.5°	1667.7	1670.9	1672.4	1683.3	1684.9
15°	1641.3	1645.9	1649.0	1663.1	1666.2
17.5°	1611.6	1616.3	1624.1	1639.7	1642.8
20°	1575.8	1582.0	1591.4	1611.6	1616.3
22.5°	1536.8	1543.1	1558.6	1577.3	1585.1
25°	1491.6	1504.1	1519.7	1544.6	1549.3
27.5°	1446.4	1457.3	1477.6	1504.1	1510.3
30°	1393.4	1410.6	1435.5	1462.0	1468.2
32.5°	1342.0	1359.1	1388.8	1416.8	1424.6
35°	1289.0	1304.6	1335.8	1368.5	1377.8
37.5°	1228.2	1248.5	1282.8	1315.5	1324.8
40°	1164.3	1189.2	1228.2	1262.5	1273.4
42.5°	1103.5	1130.0	1169.0	1206.4	1218.9
45°	1039.6	1064.6	1111.3	1153.4	1162.7
47.5°	974.2	1002.2	1052.1	1094.2	1109.8
50°	908.7	938.3	991.3	1034.9	1044.3
52.5°	843.2	874.4	930.5	977.3	981.9
55°	774.6	808.9	868.2	913.4	922.7
57.5°	712.3	741.9	805.8	852.6	863.5
60°	643.7	676.5	745.0	788.7	802.7
62.5°	578.3	612.5	684.2	727.9	740.4
65°	509.7	548.6	618.8	670.2	682.7
67.5°	450.4	487.9	562.7	612.5	625.0
70°	381.9	424.0	503.4	554.9	567.3
72.5°	322.6	366.3	445.8	495.6	514.4
75°	258.7	308.6	388.1	441.1	453.6
77.5°	196.4	254.1	335.1	375.6	375.6
80°	140.3	201.1	275.9	294.6	297.7
82.5°	92.0	151.2	204.2	202.6	202.6
85°	53.0	98.2	121.6	118.5	118.5
87.5°	20.3	40.5	43.6	43.6	42.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)