

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: P311580

Luminaire Tested: **24FCZ2-50-UNV-L82765-S-CA125-W2A-U-3000K**

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: P311580
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-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 3000K 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: 4520.0 lumens
Efficiency: N/A
Efficacy: 106.6 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

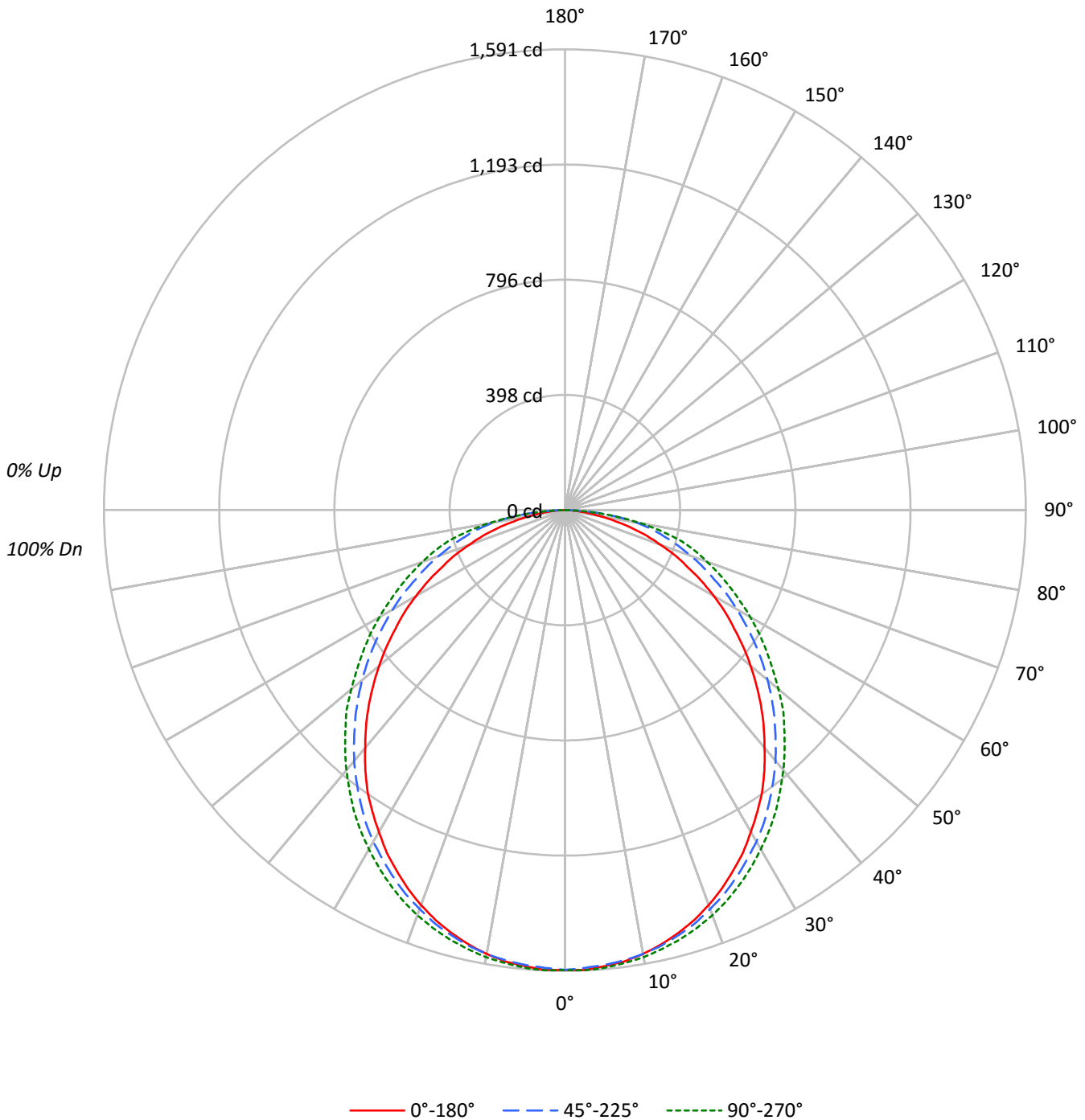
Input Watts (W): 42.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P311580

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-S-CA125-W2A-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P311580

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-S-CA125-W2A-U-3000K

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°	2137	2137	2137
5°	2135	2129	2143
10°	2126	2126	2142
15°	2106	2116	2138
20°	2078	2099	2132
25°	2040	2078	2119
30°	1994	2054	2101
35°	1950	2021	2085
40°	1884	1987	2060
45°	1822	1948	2038
50°	1752	1911	2013
55°	1674	1876	1994
60°	1596	1847	1990
65°	1495	1815	2002
70°	1384	1824	2056
75°	1239	1858	2172
80°	1001	1969	2125
85°	753	1729	1684



TEST NUMBER: P311580

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-S-CA125-W2A-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.3	3.3
10°-20°	429.5	9.5
20°-30°	645.7	14.3
30°-40°	769.1	17.0
40°-50°	787.2	17.4
50°-60°	708.7	15.7
60°-70°	556.5	12.3
70°-80°	361.2	8.0
80°-90°	111.7	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°	1225.6	27.1
0°-40°	1994.7	44.1
0°-60°	3490.5	77.2
0°-90°	4520.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4520.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1588	1588	1588	1588	1588	
5°	1581	1584	1576	1585	1586	150
15°	1512	1516	1519	1532	1535	426
25°	1374	1386	1400	1423	1427	633
35°	1187	1202	1230	1261	1269	741
45°	958	981	1024	1062	1071	738
55°	714	745	800	841	850	640
65°	470	505	570	617	629	467
75°	238	284	358	406	418	252
85°	49	90	112	109	109	59
90°	0	0	0	0	0	



TEST NUMBER: P311580

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-S-CA125-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1587.9	1587.9	1587.9	1587.9	1587.9
2.5°	1589.3	1589.3	1582.2	1589.3	1590.8
5°	1580.7	1583.6	1576.4	1585.0	1586.5
7.5°	1572.1	1572.1	1567.8	1576.4	1577.9
10°	1556.3	1557.8	1556.3	1566.4	1567.8
12.5°	1536.2	1539.1	1540.5	1550.6	1552.0
15°	1511.8	1516.1	1519.0	1531.9	1534.8
17.5°	1484.5	1488.8	1496.0	1510.4	1513.2
20°	1451.5	1457.3	1465.9	1484.5	1488.8
22.5°	1415.6	1421.4	1435.7	1452.9	1460.1
25°	1374.0	1385.5	1399.8	1422.8	1427.1
27.5°	1332.3	1342.4	1361.1	1385.5	1391.2
30°	1283.5	1299.3	1322.3	1346.7	1352.4
32.5°	1236.2	1251.9	1279.2	1305.1	1312.2
35°	1187.3	1201.7	1230.4	1260.6	1269.2
37.5°	1131.3	1150.0	1181.6	1211.7	1220.4
40°	1072.5	1095.5	1131.3	1162.9	1173.0
42.5°	1016.5	1040.9	1076.8	1111.2	1122.7
45°	957.6	980.6	1023.7	1062.4	1071.0
47.5°	897.3	923.2	969.1	1007.9	1022.2
50°	837.0	864.3	913.1	953.3	961.9
52.5°	776.7	805.4	857.1	900.2	904.5
55°	713.6	745.1	799.7	841.3	849.9
57.5°	656.1	683.4	742.3	785.3	795.4
60°	593.0	623.1	686.3	726.5	739.4
62.5°	532.7	564.2	630.3	670.5	682.0
65°	469.5	505.4	570.0	617.4	628.8
67.5°	414.9	449.4	518.3	564.2	575.7
70°	351.8	390.5	463.7	511.1	522.6
72.5°	297.2	337.4	410.6	456.6	473.8
75°	238.3	284.3	357.5	406.3	417.8
77.5°	180.9	234.0	308.7	346.0	346.0
80°	129.2	185.2	254.1	271.4	274.2
82.5°	84.7	139.3	188.1	186.6	186.6
85°	48.8	90.5	112.0	109.1	109.1
87.5°	18.7	37.3	40.2	40.2	38.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)