

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: P311497

Luminaire Tested: **24FCZ2-45-UNV-L82765-S-CA125-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: P311497
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: 24FCZ2-45-UNV-L82765-S-CA125-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC 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: 4534.0 lumens
Efficiency: N/A
Efficacy: 115.4 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

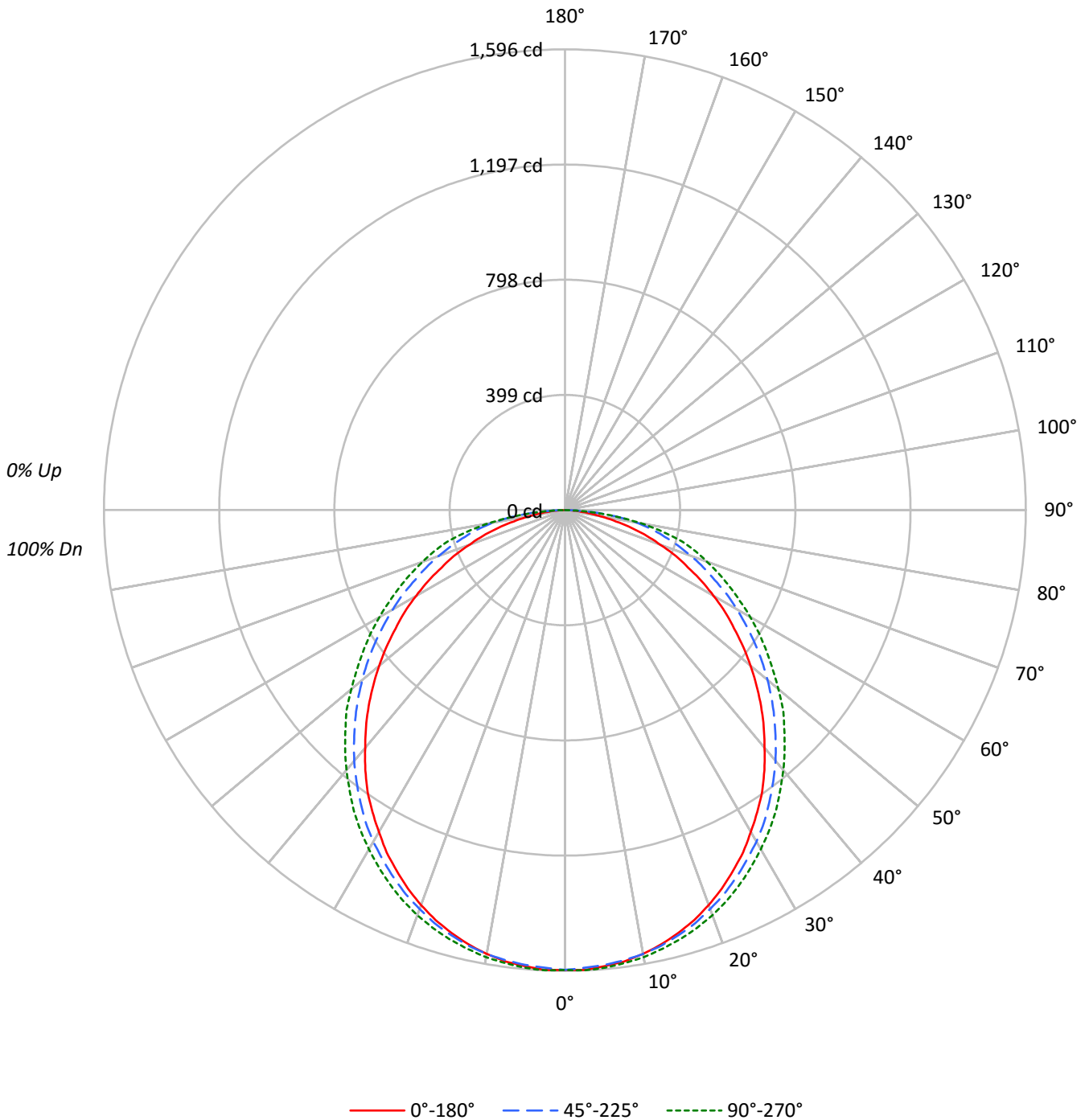
Input Watts (W): 39.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P311497

CATALOG NUMBER: 24FCZ2-45-UNV-L82765-S-CA125-W2A-U-6500K

Luminous Intensity Polar Plot





TEST NUMBER: P311497

CATALOG NUMBER: 24FCZ2-45-UNV-L82765-S-CA125-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°	2143	2143	2143
5°	2142	2136	2149
10°	2133	2133	2149
15°	2112	2122	2144
20°	2085	2105	2138
25°	2046	2085	2125
30°	2000	2061	2108
35°	1956	2027	2091
40°	1890	1993	2067
45°	1828	1954	2044
50°	1757	1917	2020
55°	1679	1882	2000
60°	1601	1852	1996
65°	1499	1820	2008
70°	1388	1830	2062
75°	1243	1864	2179
80°	1004	1975	2132
85°	756	1734	1690



TEST NUMBER: P311497

CATALOG NUMBER: 24FCZ2-45-UNV-L82765-S-CA125-W2A-U-6500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.8	3.3
10°-20°	430.9	9.5
20°-30°	647.7	14.3
30°-40°	771.5	17.0
40°-50°	789.6	17.4
50°-60°	710.9	15.7
60°-70°	558.3	12.3
70°-80°	362.3	8.0
80°-90°	112.1	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°	1229.4	27.1
0°-40°	2000.9	44.1
0°-60°	3501.4	77.2
0°-90°	4534.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4534.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1593	1593	1593	1593	1593	
5°	1586	1588	1581	1590	1591	151
15°	1516	1521	1524	1537	1540	428
25°	1378	1390	1404	1427	1432	635
35°	1191	1205	1234	1264	1273	743
45°	961	984	1027	1066	1074	741
55°	716	747	802	844	853	642
65°	471	507	572	619	631	469
75°	239	285	359	408	419	253
85°	49	91	112	110	110	59
90°	0	0	0	0	0	



TEST NUMBER: P311497

CATALOG NUMBER: 24FCZ2-45-UNV-L82765-S-CA125-W2A-U-6500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1592.8	1592.8	1592.8	1592.8	1592.8
2.5°	1594.3	1594.3	1587.1	1594.3	1595.7
5°	1585.6	1588.5	1581.3	1589.9	1591.4
7.5°	1577.0	1577.0	1572.7	1581.3	1582.7
10°	1561.1	1562.6	1561.1	1571.2	1572.7
12.5°	1541.0	1543.9	1545.3	1555.4	1556.8
15°	1516.5	1520.8	1523.7	1536.7	1539.5
17.5°	1489.1	1493.5	1500.7	1515.1	1517.9
20°	1456.0	1461.8	1470.4	1489.1	1493.5
22.5°	1420.0	1425.8	1440.2	1457.4	1464.6
25°	1378.2	1389.8	1404.2	1427.2	1431.5
27.5°	1336.5	1346.6	1365.3	1389.8	1395.5
30°	1287.5	1303.4	1326.4	1350.9	1356.6
32.5°	1240.0	1255.8	1283.2	1309.1	1316.3
35°	1191.0	1205.4	1234.2	1264.5	1273.1
37.5°	1134.9	1153.6	1185.3	1215.5	1224.1
40°	1075.8	1098.8	1134.9	1166.5	1176.6
42.5°	1019.6	1044.1	1080.1	1114.7	1126.2
45°	960.6	983.6	1026.8	1065.7	1074.4
47.5°	900.1	926.0	972.1	1011.0	1025.4
50°	839.6	867.0	915.9	956.3	964.9
52.5°	779.1	807.9	859.8	903.0	907.3
55°	715.8	747.4	802.2	843.9	852.6
57.5°	658.2	685.5	744.6	787.8	797.9
60°	594.8	625.0	688.4	728.7	741.7
62.5°	534.3	566.0	632.2	672.6	684.1
65°	470.9	506.9	571.7	619.3	630.8
67.5°	416.2	450.8	519.9	566.0	577.5
70°	352.8	391.7	465.2	512.7	524.2
72.5°	298.1	338.4	411.9	458.0	475.3
75°	239.1	285.2	358.6	407.6	419.1
77.5°	181.5	234.7	309.6	347.1	347.1
80°	129.6	185.8	254.9	272.2	275.1
82.5°	85.0	139.7	188.7	187.2	187.2
85°	49.0	90.7	112.3	109.5	109.5
87.5°	18.7	37.4	40.3	40.3	38.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)