

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: P311503

Luminaire Tested: **24FCZ2-45-UNV-L82765-S-CP125-W2A-U-5000K**

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: P311503
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-CP125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (168) 5000K 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: 4380.0 lumens
Efficiency: N/A
Efficacy: 113.8 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

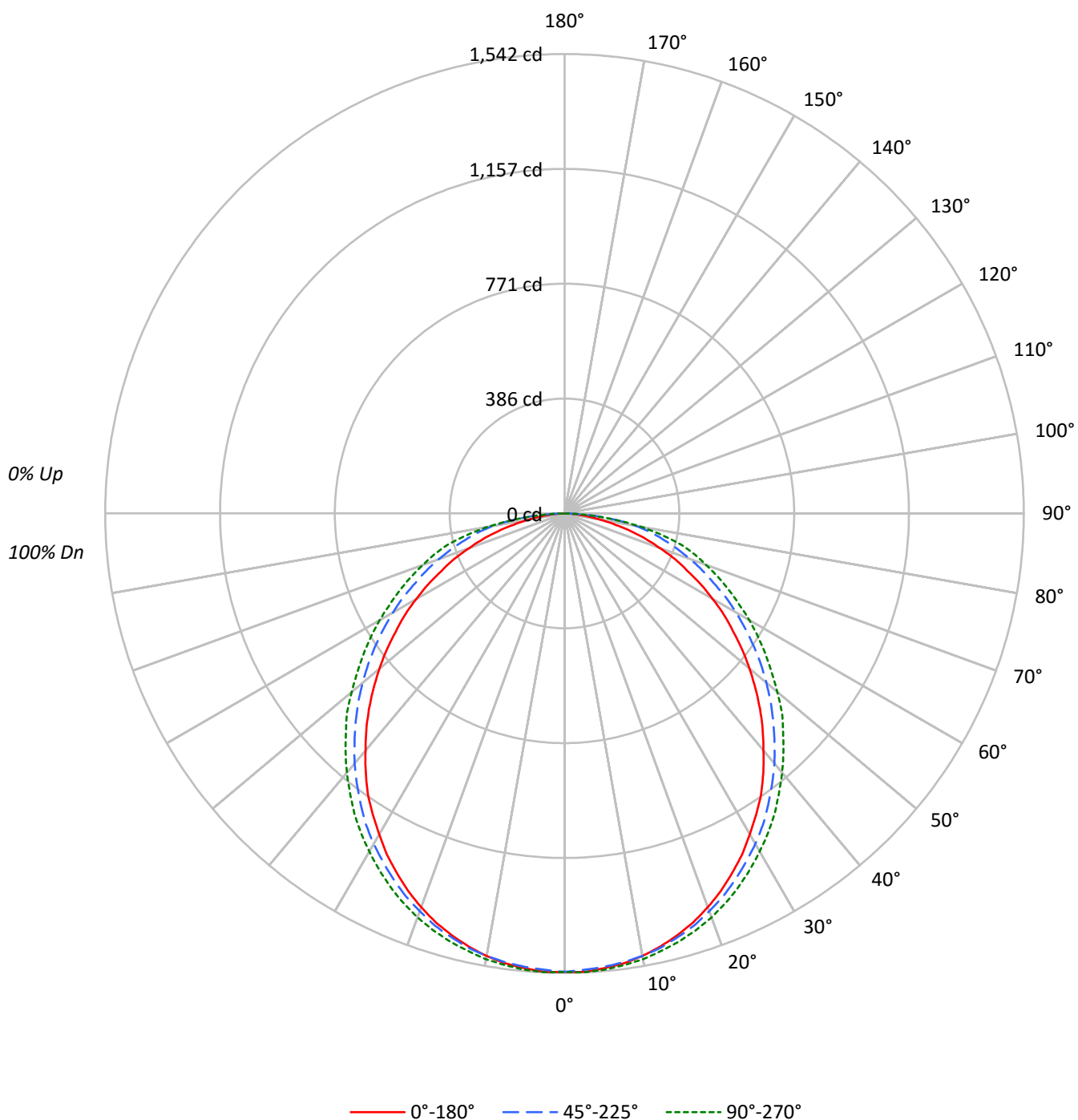
Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P311503

CATALOG NUMBER: 24FCZ2-45-UNV-L82765-S-CP125-W2A-U-5000K

Luminous Intensity Polar Plot





TEST NUMBER: P311503

CATALOG NUMBER: 24FCZ2-45-UNV-L82765-S-CP125-W2A-U-5000K

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2070	2070	2070
5°	2069	2063	2076
10°	2060	2060	2076
15°	2041	2050	2072
20°	2014	2034	2066
25°	1977	2014	2053
30°	1932	1991	2036
35°	1890	1958	2020
40°	1825	1926	1997
45°	1766	1888	1975
50°	1698	1852	1951
55°	1622	1818	1932
60°	1546	1790	1928
65°	1448	1758	1940
70°	1341	1768	1992
75°	1200	1801	2105
80°	970	1908	2059
85°	730	1675	1632



TEST NUMBER: P311503

CATALOG NUMBER: 24FCZ2-45-UNV-L82765-S-CP125-W2A-U-5000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.7	3.3
10°-20°	416.2	9.5
20°-30°	625.7	14.3
30°-40°	745.3	17.0
40°-50°	762.8	17.4
50°-60°	686.7	15.7
60°-70°	539.3	12.3
70°-80°	350.0	8.0
80°-90°	108.3	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°	1187.6	27.1
0°-40°	1932.9	44.1
0°-60°	3382.4	77.2
0°-90°	4380.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4380.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1539	1539	1539	1539	1539	
5°	1532	1534	1528	1536	1537	146
15°	1465	1469	1472	1484	1487	413
25°	1331	1343	1356	1379	1383	613
35°	1151	1164	1192	1222	1230	718
45°	928	950	992	1030	1038	715
55°	692	722	775	815	824	620
65°	455	490	552	598	609	453
75°	231	276	346	394	405	244
85°	47	88	108	106	106	57
90°	0	0	0	0	0	



TEST NUMBER: P311503

CATALOG NUMBER: 24FCZ2-45-UNV-L82765-S-CP125-W2A-U-5000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1538.7	1538.7	1538.7	1538.7	1538.7
2.5°	1540.1	1540.1	1533.2	1540.1	1541.5
5°	1531.8	1534.5	1527.6	1535.9	1537.3
7.5°	1523.4	1523.4	1519.2	1527.6	1529.0
10°	1508.1	1509.5	1508.1	1517.9	1519.2
12.5°	1488.6	1491.4	1492.8	1502.6	1503.9
15°	1465.0	1469.2	1471.9	1484.5	1487.2
17.5°	1438.6	1442.7	1449.7	1463.6	1466.4
20°	1406.6	1412.1	1420.5	1438.6	1442.7
22.5°	1371.8	1377.3	1391.3	1407.9	1414.9
25°	1331.4	1342.6	1356.5	1378.7	1382.9
27.5°	1291.1	1300.8	1318.9	1342.6	1348.1
30°	1243.8	1259.1	1281.3	1305.0	1310.6
32.5°	1197.9	1213.2	1239.6	1264.6	1271.6
35°	1150.6	1164.5	1192.3	1221.5	1229.9
37.5°	1096.3	1114.4	1145.0	1174.2	1182.6
40°	1039.3	1061.5	1096.3	1126.9	1136.7
42.5°	985.0	1008.7	1043.4	1076.8	1088.0
45°	928.0	950.2	992.0	1029.5	1037.9
47.5°	869.5	894.6	939.1	976.7	990.6
50°	811.1	837.5	884.8	923.8	932.1
52.5°	752.7	780.5	830.6	872.3	876.5
55°	691.5	722.1	774.9	815.3	823.6
57.5°	635.8	662.2	719.3	761.0	770.8
60°	574.6	603.8	665.0	704.0	716.5
62.5°	516.2	546.8	610.8	649.7	660.8
65°	454.9	489.7	552.3	598.2	609.4
67.5°	402.1	435.5	502.2	546.8	557.9
70°	340.9	378.4	449.4	495.3	506.4
72.5°	288.0	326.9	397.9	442.4	459.1
75°	230.9	275.5	346.4	393.7	404.9
77.5°	175.3	226.8	299.1	335.3	335.3
80°	125.2	179.5	246.3	262.9	265.7
82.5°	82.1	135.0	182.3	180.9	180.9
85°	47.3	87.6	108.5	105.7	105.7
87.5°	18.1	36.2	39.0	39.0	37.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)