

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: P310908

Luminaire Tested: **24FCZ2-50-UNV-L82765-CA125-W2A-U-4500K**

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: P310908
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 4500K 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: 4629.0 lumens
Efficiency: N/A
Efficacy: 106.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

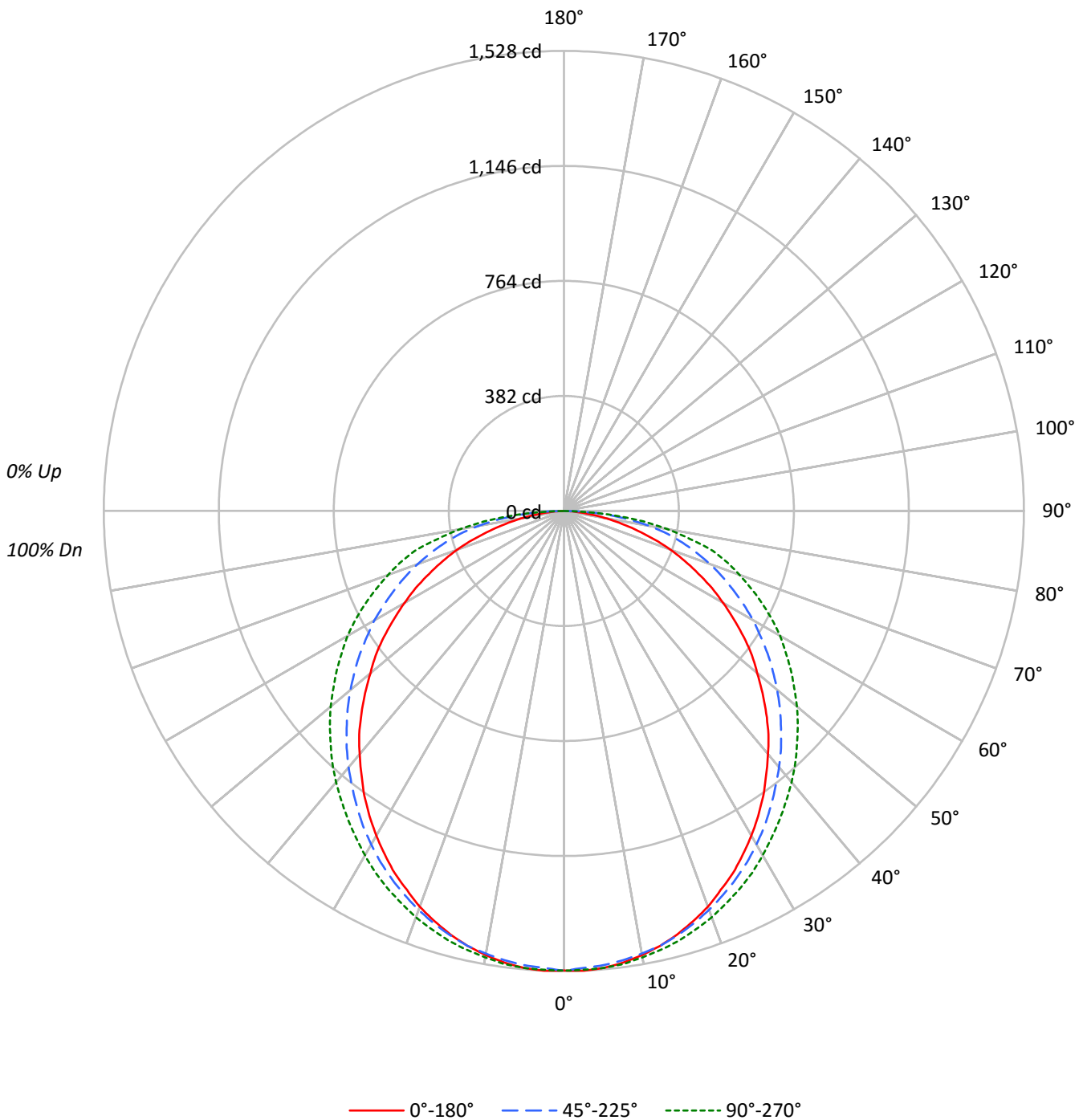
Input Watts (W): 43.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2054	2054	2054
5°	2058	2045	2058
10°	2046	2040	2056
15°	2028	2032	2058
20°	2003	2019	2056
25°	1972	2004	2054
30°	1935	1988	2052
35°	1897	1968	2054
40°	1853	1953	2066
45°	1809	1940	2084
50°	1755	1935	2115
55°	1711	1938	2158
60°	1645	1955	2232
65°	1570	1975	2313
70°	1486	2036	2441
75°	1325	2124	2667
80°	1130	2249	2725
85°	806	2229	2607



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.5	3.1
10°-20°	413.1	8.9
20°-30°	624.0	13.5
30°-40°	752.0	16.2
40°-50°	789.5	17.1
50°-60°	738.6	16.0
60°-70°	610.0	13.2
70°-80°	415.6	9.0
80°-90°	141.7	3.1
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°	1181.5	25.5
0°-40°	1933.6	41.8
0°-60°	3461.7	74.8
0°-90°	4629.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4629.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1527	1527	1527	1527	1527	
5°	1524	1522	1514	1524	1524	145
15°	1456	1458	1459	1474	1478	410
25°	1328	1335	1350	1376	1384	611
35°	1155	1167	1198	1238	1250	722
45°	951	971	1020	1075	1095	733
55°	730	759	826	894	920	651
65°	493	534	620	699	726	489
75°	255	313	408	485	513	272
85°	52	103	144	163	169	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1526.6	1526.6	1526.6	1526.6	1526.6
2.5°	1528.1	1526.6	1518.9	1526.6	1525.1
5°	1523.5	1522.0	1514.3	1523.5	1523.5
7.5°	1512.8	1512.8	1505.1	1515.9	1517.4
10°	1497.4	1497.4	1492.8	1505.1	1505.1
12.5°	1479.0	1479.0	1479.0	1491.3	1492.8
15°	1456.0	1457.5	1459.0	1474.4	1477.5
17.5°	1428.3	1431.4	1436.0	1454.4	1457.5
20°	1399.1	1402.2	1409.9	1431.4	1436.0
22.5°	1362.3	1370.0	1380.7	1405.3	1409.9
25°	1328.5	1334.6	1350.0	1376.1	1383.8
27.5°	1287.0	1296.2	1316.2	1343.8	1354.6
30°	1245.5	1254.8	1279.3	1311.6	1320.8
32.5°	1201.0	1214.8	1240.9	1274.7	1285.5
35°	1154.9	1167.2	1197.9	1237.9	1250.2
37.5°	1104.3	1121.1	1154.9	1197.9	1213.3
40°	1055.1	1073.5	1111.9	1158.0	1176.4
42.5°	1006.0	1024.4	1067.4	1119.6	1138.0
45°	950.7	970.6	1019.8	1075.1	1095.0
47.5°	895.4	920.0	973.7	1032.1	1053.6
50°	838.6	866.2	924.6	986.0	1010.6
52.5°	787.9	814.0	875.4	941.5	964.5
55°	729.5	758.7	826.3	893.8	920.0
57.5°	669.6	701.9	774.1	847.8	873.9
60°	611.3	646.6	726.4	800.2	829.3
62.5°	554.4	589.8	672.7	749.5	778.7
65°	493.0	534.5	620.5	698.8	726.4
67.5°	434.6	479.2	569.8	646.6	674.2
70°	377.8	420.8	517.6	592.8	620.5
72.5°	316.4	365.5	462.3	540.6	569.8
75°	254.9	313.3	408.5	485.3	513.0
77.5°	198.1	258.0	353.2	416.2	430.0
80°	145.9	207.3	290.3	334.8	351.7
82.5°	93.7	155.1	221.2	253.4	267.2
85°	52.2	102.9	144.4	162.8	168.9
87.5°	21.5	44.5	58.4	66.0	66.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)