

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: P311578

Luminaire Tested: **24FCZ2-50-UNV-L82765-S-CA08-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: P311578
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-CA08-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" 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: 5022.0 lumens
Efficiency: N/A
Efficacy: 112.6 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

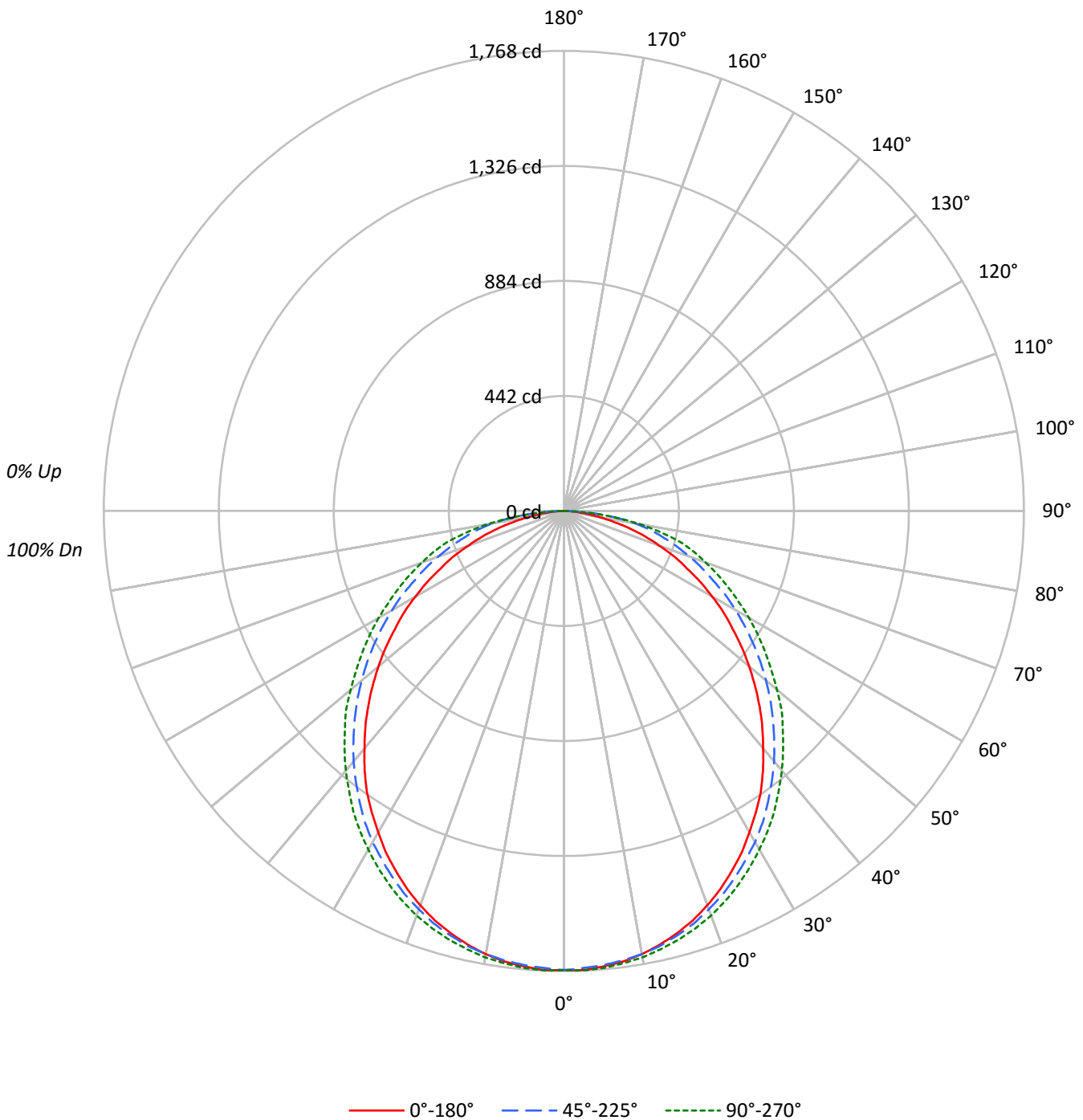
Input Watts (W): 44.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2374	2374	2374
5°	2372	2366	2381
10°	2363	2363	2380
15°	2340	2351	2375
20°	2309	2332	2369
25°	2266	2309	2354
30°	2216	2283	2335
35°	2167	2246	2316
40°	2093	2208	2289
45°	2025	2164	2264
50°	1947	2124	2237
55°	1860	2084	2215
60°	1773	2052	2211
65°	1661	2016	2224
70°	1537	2027	2284
75°	1377	2065	2413
80°	1113	2187	2361
85°	837	1920	1871



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	167.0	3.3
10°-20°	477.2	9.5
20°-30°	717.4	14.3
30°-40°	854.6	17.0
40°-50°	874.6	17.4
50°-60°	787.4	15.7
60°-70°	618.4	12.3
70°-80°	401.3	8.0
80°-90°	124.1	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°	1361.7	27.1
0°-40°	2216.2	44.1
0°-60°	3878.2	77.2
0°-90°	5022.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5022.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1764	1764	1764	1764	1764	
5°	1756	1760	1752	1761	1763	167
15°	1680	1684	1688	1702	1705	474
25°	1527	1539	1555	1581	1586	703
35°	1319	1335	1367	1401	1410	823
45°	1064	1090	1137	1180	1190	820
55°	793	828	888	935	944	711
65°	522	562	633	686	699	519
75°	265	316	397	451	464	280
85°	54	100	124	121	121	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1764.3	1764.3	1764.3	1764.3	1764.3
2.5°	1765.9	1765.9	1757.9	1765.9	1767.5
5°	1756.3	1759.5	1751.5	1761.1	1762.7
7.5°	1746.7	1746.7	1741.9	1751.5	1753.1
10°	1729.2	1730.8	1729.2	1740.3	1741.9
12.5°	1706.8	1710.0	1711.6	1722.8	1724.4
15°	1679.7	1684.5	1687.7	1702.0	1705.2
17.5°	1649.4	1654.2	1662.2	1678.1	1681.3
20°	1612.7	1619.1	1628.7	1649.4	1654.2
22.5°	1572.8	1579.2	1595.2	1614.3	1622.3
25°	1526.6	1539.3	1555.3	1580.8	1585.6
27.5°	1480.3	1491.5	1512.2	1539.3	1545.7
30°	1426.1	1443.6	1469.2	1496.3	1502.7
32.5°	1373.4	1391.0	1421.3	1450.0	1458.0
35°	1319.2	1335.2	1367.1	1400.6	1410.1
37.5°	1257.0	1277.7	1312.8	1346.3	1355.9
40°	1191.6	1217.1	1257.0	1292.1	1303.3
42.5°	1129.4	1156.5	1196.4	1234.7	1247.4
45°	1064.0	1089.5	1137.4	1180.4	1190.0
47.5°	997.0	1025.7	1076.7	1119.8	1135.8
50°	930.0	960.3	1014.5	1059.2	1068.8
52.5°	863.0	894.9	952.3	1000.2	1005.0
55°	792.8	827.9	888.5	934.8	944.3
57.5°	729.0	759.3	824.7	872.6	883.7
60°	658.8	692.3	762.5	807.2	821.5
62.5°	591.8	626.9	700.3	744.9	757.7
65°	521.6	561.5	633.3	685.9	698.7
67.5°	461.0	499.3	575.9	626.9	639.7
70°	390.8	433.9	515.2	567.9	580.6
72.5°	330.2	374.9	456.2	507.3	526.4
75°	264.8	315.8	397.2	451.4	464.2
77.5°	201.0	260.0	343.0	384.4	384.4
80°	143.6	205.8	282.3	301.5	304.7
82.5°	94.1	154.7	209.0	207.4	207.4
85°	54.2	100.5	124.4	121.2	121.2
87.5°	20.7	41.5	44.7	44.7	43.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)