

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: P310901

Luminaire Tested: **24FCZ2-50-UNV-L82765-CA08-W2A-U-5500K**

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: P310901
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-CA08-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 5500K 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: 4755.0 lumens
Efficiency: N/A
Efficacy: 108.3 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

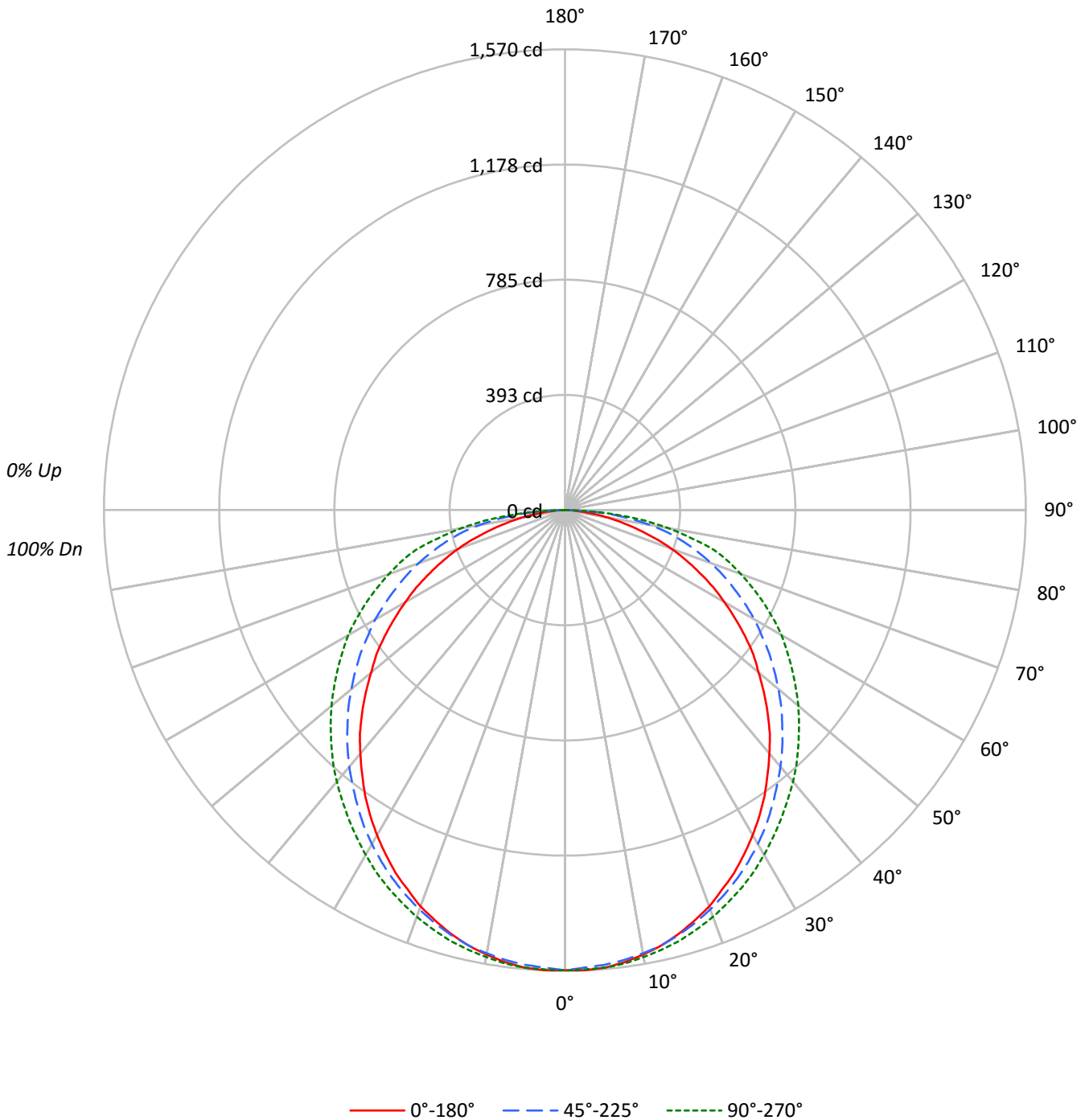
Input Watts (W): 43.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2110	2110	2110
5°	2114	2101	2114
10°	2102	2095	2112
15°	2083	2088	2114
20°	2058	2074	2112
25°	2026	2059	2110
30°	1988	2042	2108
35°	1949	2021	2109
40°	1904	2006	2123
45°	1858	1993	2140
50°	1803	1988	2173
55°	1758	1991	2217
60°	1690	2008	2292
65°	1612	2029	2376
70°	1527	2092	2507
75°	1362	2181	2739
80°	1161	2311	2799
85°	827	2289	2678



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.4	3.1
10°-20°	424.4	8.9
20°-30°	640.9	13.5
30°-40°	772.5	16.2
40°-50°	811.0	17.1
50°-60°	758.7	16.0
60°-70°	626.6	13.2
70°-80°	426.9	9.0
80°-90°	145.6	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°	1213.7	25.5
0°-40°	1986.2	41.8
0°-60°	3555.9	74.8
0°-90°	4755.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4755.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1568	1568	1568	1568	1568	
5°	1565	1563	1556	1565	1565	149
15°	1496	1497	1499	1514	1518	422
25°	1365	1371	1387	1414	1421	628
35°	1186	1199	1230	1272	1284	741
45°	976	997	1048	1104	1125	753
55°	749	779	849	918	945	669
65°	506	549	637	718	746	502
75°	262	322	420	498	527	279
85°	54	106	148	167	174	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1568.2	1568.2	1568.2	1568.2	1568.2
2.5°	1569.7	1568.2	1560.3	1568.2	1566.6
5°	1565.0	1563.4	1555.5	1565.0	1565.0
7.5°	1554.0	1554.0	1546.1	1557.1	1558.7
10°	1538.2	1538.2	1533.4	1546.1	1546.1
12.5°	1519.3	1519.3	1519.3	1531.9	1533.4
15°	1495.6	1497.2	1498.7	1514.5	1517.7
17.5°	1467.2	1470.3	1475.1	1494.0	1497.2
20°	1437.2	1440.4	1448.3	1470.3	1475.1
22.5°	1399.4	1407.2	1418.3	1443.5	1448.3
25°	1364.6	1371.0	1386.7	1413.6	1421.4
27.5°	1322.0	1331.5	1352.0	1380.4	1391.5
30°	1279.5	1288.9	1314.2	1347.3	1356.8
32.5°	1233.7	1247.9	1274.7	1309.4	1320.5
35°	1186.4	1199.0	1230.5	1271.6	1284.2
37.5°	1134.3	1151.7	1186.4	1230.5	1246.3
40°	1083.8	1102.8	1142.2	1189.5	1208.5
42.5°	1033.3	1052.3	1096.4	1150.1	1169.0
45°	976.5	997.1	1047.5	1104.3	1124.8
47.5°	919.8	945.0	1000.2	1060.2	1082.2
50°	861.4	889.8	949.7	1012.8	1038.1
52.5°	809.3	836.1	899.2	967.1	990.7
55°	749.4	779.3	848.8	918.2	945.0
57.5°	687.8	721.0	795.1	870.8	897.7
60°	627.9	664.2	746.2	821.9	851.9
62.5°	569.5	605.8	691.0	769.9	799.9
65°	506.4	549.0	637.4	717.8	746.2
67.5°	446.5	492.2	585.3	664.2	692.6
70°	388.1	432.3	531.7	609.0	637.4
72.5°	325.0	375.5	474.9	555.3	585.3
75°	261.9	321.8	419.6	498.5	526.9
77.5°	203.5	265.0	362.9	427.5	441.7
80°	149.9	213.0	298.2	343.9	361.3
82.5°	96.2	159.3	227.2	260.3	274.5
85°	53.6	105.7	148.3	167.2	173.5
87.5°	22.1	45.8	59.9	67.8	67.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)