

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: P311577

Luminaire Tested: **24FCZ2-50-UNV-L82765-S-CA08-W2A-U-5700K**

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: P311577
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-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 5700K 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: 5010.0 lumens
Efficiency: N/A
Efficacy: 114.1 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

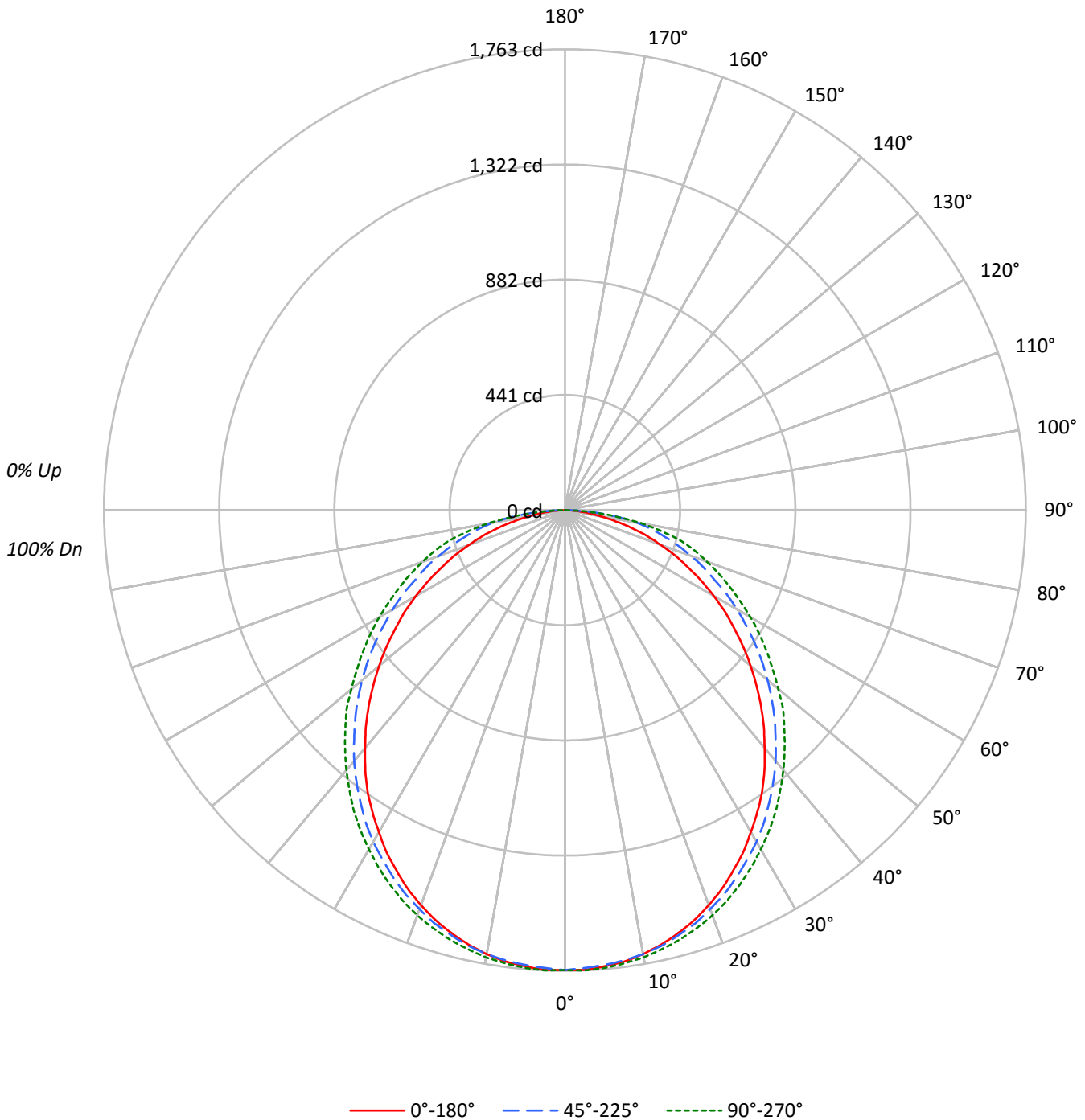
Input Watts (W): 43.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2368	2368	2368
5°	2366	2360	2375
10°	2357	2357	2374
15°	2334	2345	2370
20°	2304	2326	2363
25°	2261	2303	2348
30°	2210	2277	2329
35°	2162	2240	2311
40°	2088	2203	2284
45°	2020	2159	2259
50°	1942	2119	2232
55°	1855	2079	2210
60°	1769	2047	2206
65°	1657	2011	2219
70°	1534	2022	2279
75°	1373	2060	2407
80°	1110	2183	2356
85°	835	1916	1866



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	166.6	3.3
10°-20°	476.1	9.5
20°-30°	715.7	14.3
30°-40°	852.5	17.0
40°-50°	872.5	17.4
50°-60°	785.5	15.7
60°-70°	616.9	12.3
70°-80°	400.4	8.0
80°-90°	123.8	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°	1358.4	27.1
0°-40°	2210.9	44.1
0°-60°	3868.9	77.2
0°-90°	5010.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5010.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1760	1760	1760	1760	1760	
5°	1752	1755	1747	1757	1758	166
15°	1676	1680	1684	1698	1701	472
25°	1523	1536	1552	1577	1582	702
35°	1316	1332	1364	1397	1407	821
45°	1061	1087	1135	1178	1187	818
55°	791	826	886	932	942	709
65°	520	560	632	684	697	518
75°	264	315	396	450	463	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°	1760.0	1760.0	1760.0	1760.0	1760.0
2.5°	1761.6	1761.6	1753.7	1761.6	1763.2
5°	1752.1	1755.3	1747.3	1756.9	1758.5
7.5°	1742.5	1742.5	1737.8	1747.3	1748.9
10°	1725.0	1726.6	1725.0	1736.2	1737.8
12.5°	1702.8	1705.9	1707.5	1718.7	1720.3
15°	1675.7	1680.5	1683.7	1698.0	1701.2
17.5°	1645.5	1650.2	1658.2	1674.1	1677.3
20°	1608.9	1615.2	1624.8	1645.5	1650.2
22.5°	1569.1	1575.4	1591.4	1610.5	1618.4
25°	1522.9	1535.7	1551.6	1577.0	1581.8
27.5°	1476.8	1487.9	1508.6	1535.7	1542.0
30°	1422.7	1440.2	1465.6	1492.7	1499.1
32.5°	1370.2	1387.7	1417.9	1446.5	1454.5
35°	1316.1	1332.0	1363.8	1397.2	1406.8
37.5°	1254.0	1274.7	1309.7	1343.1	1352.7
40°	1188.7	1214.2	1254.0	1289.0	1300.1
42.5°	1126.7	1153.7	1193.5	1231.7	1244.4
45°	1061.4	1086.9	1134.6	1177.6	1187.2
47.5°	994.6	1023.2	1074.2	1117.1	1133.0
50°	927.8	958.0	1012.1	1056.7	1066.2
52.5°	860.9	892.8	950.0	997.8	1002.6
55°	790.9	825.9	886.4	932.5	942.1
57.5°	727.3	757.5	822.7	870.5	881.6
60°	657.2	690.7	760.7	805.2	819.6
62.5°	590.4	625.4	698.6	743.2	755.9
65°	520.4	560.2	631.8	684.3	697.0
67.5°	459.9	498.1	574.5	625.4	638.1
70°	389.9	432.9	514.0	566.5	579.3
72.5°	329.4	374.0	455.1	506.1	525.1
75°	264.2	315.1	396.2	450.4	463.1
77.5°	200.5	259.4	342.1	383.5	383.5
80°	143.2	205.3	281.7	300.8	304.0
82.5°	93.9	154.4	208.5	206.9	206.9
85°	54.1	100.3	124.1	120.9	120.9
87.5°	20.7	41.4	44.6	44.6	43.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)