

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: P311541

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-S-CA125-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: P311541
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: 24FCZ2-50HE-UNV-L82765-S-CA125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 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: 5016.0 lumens
Efficiency: N/A
Efficacy: 127.0 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

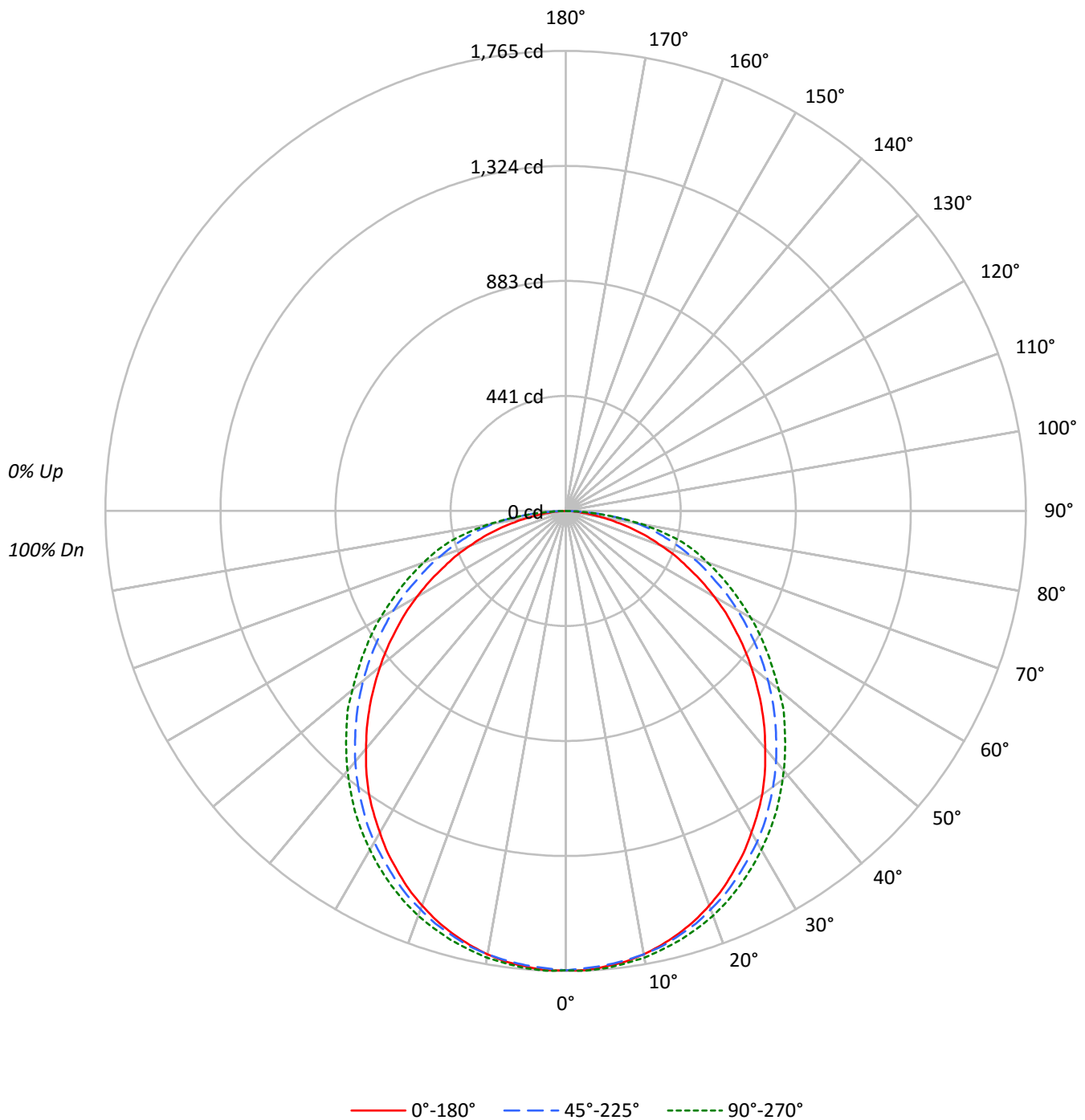
Input Watts (W): 39.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	2371	2371	2371
5°	2369	2363	2378
10°	2360	2360	2377
15°	2337	2348	2372
20°	2306	2329	2366
25°	2264	2306	2351
30°	2213	2280	2332
35°	2164	2243	2313
40°	2090	2205	2286
45°	2022	2162	2262
50°	1944	2121	2235
55°	1858	2082	2213
60°	1771	2049	2208
65°	1659	2014	2222
70°	1536	2024	2281
75°	1375	2062	2410
80°	1111	2185	2358
85°	837	1919	1870



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	166.8	3.3
10°-20°	476.7	9.5
20°-30°	716.6	14.3
30°-40°	853.5	17.0
40°-50°	873.5	17.4
50°-60°	786.4	15.7
60°-70°	617.6	12.3
70°-80°	400.9	8.0
80°-90°	124.0	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°	1360.1	27.1
0°-40°	2213.6	44.1
0°-60°	3873.6	77.2
0°-90°	5016.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5016.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1762	1762	1762	1762	1762	
5°	1754	1757	1749	1759	1761	167
15°	1678	1682	1686	1700	1703	473
25°	1525	1538	1553	1579	1584	702
35°	1318	1334	1365	1399	1408	822
45°	1063	1088	1136	1179	1189	819
55°	792	827	887	934	943	710
65°	521	561	632	685	698	519
75°	264	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°	1762.2	1762.2	1762.2	1762.2	1762.2
2.5°	1763.7	1763.7	1755.8	1763.7	1765.3
5°	1754.2	1757.4	1749.4	1759.0	1760.6
7.5°	1744.6	1744.6	1739.8	1749.4	1751.0
10°	1727.1	1728.7	1727.1	1738.3	1739.8
12.5°	1704.8	1708.0	1709.6	1720.7	1722.3
15°	1677.7	1682.5	1685.7	1700.0	1703.2
17.5°	1647.4	1652.2	1660.2	1676.1	1679.3
20°	1610.8	1617.2	1626.7	1647.4	1652.2
22.5°	1571.0	1577.3	1593.3	1612.4	1620.4
25°	1524.8	1537.5	1553.4	1578.9	1583.7
27.5°	1478.6	1489.7	1510.4	1537.5	1543.9
30°	1424.4	1441.9	1467.4	1494.5	1500.9
32.5°	1371.8	1389.3	1419.6	1448.3	1456.2
35°	1317.6	1333.6	1365.4	1398.9	1408.4
37.5°	1255.5	1276.2	1311.3	1344.7	1354.3
40°	1190.2	1215.7	1255.5	1290.5	1301.7
42.5°	1128.0	1155.1	1195.0	1233.2	1245.9
45°	1062.7	1088.2	1136.0	1179.0	1188.6
47.5°	995.8	1024.5	1075.5	1118.5	1134.4
50°	928.9	959.1	1013.3	1057.9	1067.5
52.5°	862.0	893.8	951.2	999.0	1003.8
55°	791.9	826.9	887.4	933.7	943.2
57.5°	728.1	758.4	823.7	871.5	882.7
60°	658.0	691.5	761.6	806.2	820.5
62.5°	591.1	626.2	699.4	744.1	756.8
65°	521.0	560.8	632.5	685.1	697.9
67.5°	460.5	498.7	575.2	626.2	638.9
70°	390.4	433.4	514.6	567.2	579.9
72.5°	329.8	374.4	455.7	506.7	525.8
75°	264.5	315.5	396.7	450.9	463.6
77.5°	200.8	259.7	342.6	384.0	384.0
80°	143.4	205.5	282.0	301.1	304.3
82.5°	94.0	154.5	208.7	207.1	207.1
85°	54.2	100.4	124.3	121.1	121.1
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)