

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: P309514

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-HRP-CA125-W2A-U-5000K**

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: P309514
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
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-HRP-CA125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 5000K 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: 3576.0 lumens
Efficiency: N/A
Efficacy: 91.0 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

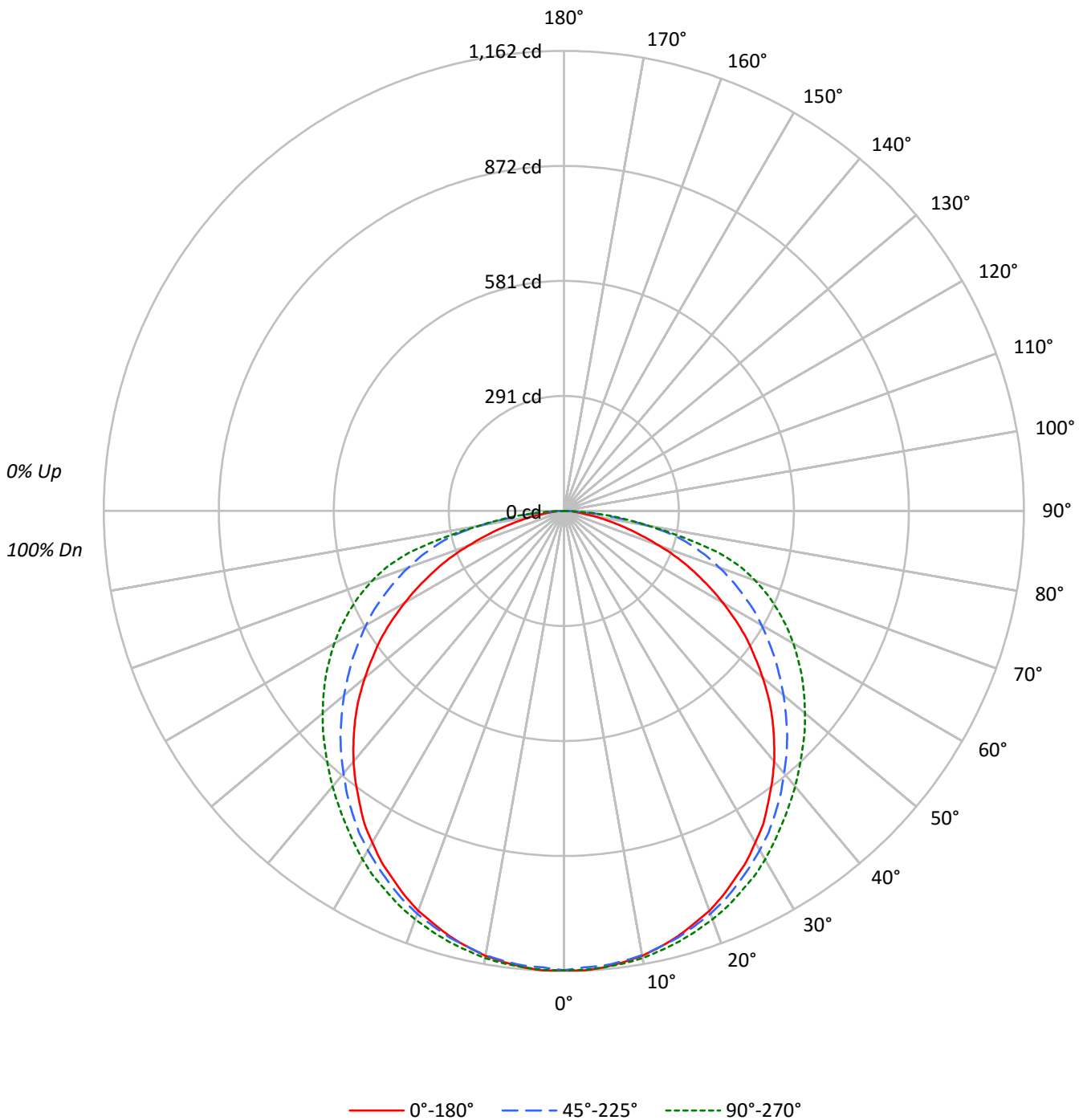
Input Watts (W): 39.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	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	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1561	1561	1561
5°	1563	1557	1563
10°	1559	1557	1567
15°	1549	1554	1568
20°	1539	1550	1571
25°	1520	1542	1574
30°	1503	1537	1579
35°	1478	1530	1581
40°	1451	1520	1596
45°	1419	1518	1621
50°	1373	1517	1664
55°	1324	1528	1724
60°	1249	1551	1801
65°	1153	1587	1902
70°	1007	1643	2026
75°	817	1728	2093
80°	603	1694	1694
85°	462	1247	1409



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.9	3.1
10°-20°	315.6	8.8
20°-30°	480.5	13.4
30°-40°	583.4	16.3
40°-50°	616.4	17.2
50°-60°	581.6	16.3
60°-70°	483.6	13.5
70°-80°	318.2	8.9
80°-90°	86.7	2.4
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°	906.0	25.3
0°-40°	1489.5	41.7
0°-60°	2687.5	75.2
0°-90°	3576.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3576.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1160	1160	1160	1160	1160	
5°	1157	1157	1153	1157	1157	110
15°	1112	1114	1115	1126	1126	314
25°	1024	1030	1039	1057	1060	472
35°	900	910	931	955	963	563
45°	746	760	798	837	852	574
55°	564	588	651	713	735	503
65°	362	404	498	572	597	358
75°	157	229	332	394	403	169
85°	30	66	81	90	91	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1160.2	1160.2	1160.2	1160.2	1160.2
2.5°	1161.7	1160.2	1154.2	1160.2	1160.2
5°	1157.2	1157.2	1152.8	1157.2	1157.2
7.5°	1149.8	1149.8	1146.8	1152.8	1152.8
10°	1140.8	1140.8	1139.3	1146.8	1146.8
12.5°	1127.3	1128.8	1127.3	1136.3	1136.3
15°	1112.3	1113.8	1115.3	1125.8	1125.8
17.5°	1092.9	1095.9	1098.9	1110.8	1112.3
20°	1074.9	1076.4	1082.4	1095.9	1097.4
22.5°	1050.9	1055.4	1062.9	1076.4	1080.9
25°	1024.0	1030.0	1039.0	1056.9	1059.9
27.5°	998.6	1003.0	1015.0	1034.5	1040.5
30°	967.1	974.6	989.6	1009.0	1016.5
32.5°	937.2	944.7	962.6	983.6	989.6
35°	899.7	910.2	931.2	955.1	962.6
37.5°	863.8	874.3	899.7	926.7	935.7
40°	826.4	838.4	865.3	896.8	908.7
42.5°	786.0	802.4	832.4	866.8	880.3
45°	745.5	760.5	797.9	836.9	851.8
47.5°	702.1	720.1	760.5	806.9	824.9
50°	655.7	678.2	724.6	775.5	794.9
52.5°	609.3	634.8	687.2	744.0	765.0
55°	564.4	588.4	651.2	712.6	735.1
57.5°	515.0	544.9	613.8	679.7	702.1
60°	464.1	497.0	576.4	645.2	669.2
62.5°	413.2	450.6	540.4	609.3	634.8
65°	362.3	404.2	498.5	571.9	597.3
67.5°	312.9	359.3	459.6	533.0	558.4
70°	256.0	314.4	417.7	489.5	515.0
72.5°	203.6	271.0	377.3	444.6	467.1
75°	157.2	229.1	332.4	393.7	402.7
77.5°	115.3	187.1	285.9	306.9	308.4
80°	77.8	149.7	218.6	215.6	218.6
82.5°	50.9	112.3	137.7	154.2	155.7
85°	29.9	65.9	80.8	89.8	91.3
87.5°	15.0	22.5	28.4	29.9	32.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)