

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: P309551

Luminaire Tested: **24FCZ2-50-UNV-L82765-HRP-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: P309551  
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: 24FCZ2-50-UNV-L82765-HRP-CA08-W2A-U-5500K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 3607.0 lumens  
Efficiency: N/A  
Efficacy: 82.2 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

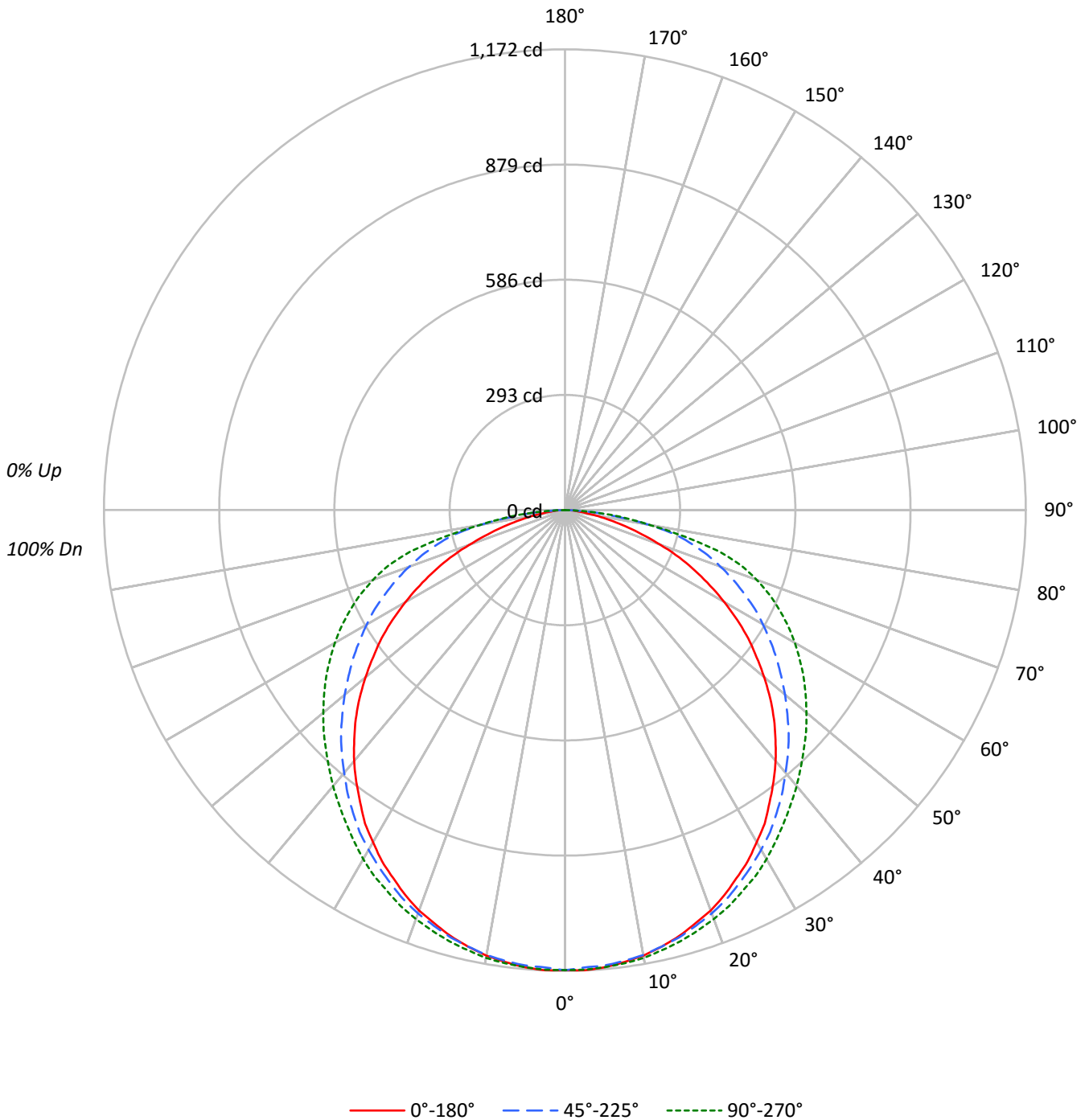
Input Watts (W): 43.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P309551

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-HRP-CA08-W2A-U-5500K

### Luminous Intensity Polar Plot





TEST NUMBER: P309551

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-HRP-CA08-W2A-U-5500K

**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°	1575	1575	1575
5°	1577	1570	1577
10°	1572	1570	1580
15°	1563	1567	1582
20°	1552	1563	1585
25°	1533	1556	1587
30°	1516	1551	1593
35°	1491	1543	1595
40°	1464	1533	1610
45°	1431	1532	1635
50°	1384	1530	1678
55°	1335	1541	1739
60°	1260	1565	1816
65°	1163	1601	1918
70°	1016	1657	2044
75°	824	1743	2112
80°	608	1709	1709
85°	466	1258	1422



TEST NUMBER: P309551

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-HRP-CA08-W2A-U-5500K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	110.9	3.1
10°-20°	318.4	8.8
20°-30°	484.7	13.4
30°-40°	588.5	16.3
40°-50°	621.7	17.2
50°-60°	586.7	16.3
60°-70°	487.8	13.5
70°-80°	320.9	8.9
80°-90°	87.5	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°	913.9	25.3
0°-40°	1502.4	41.7
0°-60°	2710.8	75.2
0°-90°	3607.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3607.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1170	1170	1170	1170	1170	
5°	1167	1167	1163	1167	1167	111
15°	1122	1124	1125	1136	1136	316
25°	1033	1039	1048	1066	1069	476
35°	908	918	939	963	971	568
45°	752	767	805	844	859	579
55°	569	594	657	719	741	507
65°	365	408	503	577	602	361
75°	159	231	335	397	406	171
85°	30	66	82	91	92	37
90°	0	0	0	0	0	



TEST NUMBER: P309551

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-HRP-CA08-W2A-U-5500K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1170.3	1170.3	1170.3	1170.3	1170.3
2.5°	1171.8	1170.3	1164.3	1170.3	1170.3
5°	1167.3	1167.3	1162.7	1167.3	1167.3
7.5°	1159.7	1159.7	1156.7	1162.7	1162.7
10°	1150.7	1150.7	1149.2	1156.7	1156.7
12.5°	1137.1	1138.6	1137.1	1146.1	1146.1
15°	1122.0	1123.5	1125.0	1135.6	1135.6
17.5°	1102.3	1105.4	1108.4	1120.5	1122.0
20°	1084.2	1085.7	1091.8	1105.4	1106.9
22.5°	1060.1	1064.6	1072.1	1085.7	1090.3
25°	1032.9	1038.9	1048.0	1066.1	1069.1
27.5°	1007.2	1011.7	1023.8	1043.4	1049.5
30°	975.5	983.0	998.1	1017.8	1025.3
32.5°	945.3	952.8	971.0	992.1	998.1
35°	907.5	918.1	939.3	963.4	971.0
37.5°	871.3	881.9	907.5	934.7	943.8
40°	833.6	845.6	872.8	904.5	916.6
42.5°	792.8	809.4	839.6	874.3	887.9
45°	752.0	767.1	804.9	844.1	859.2
47.5°	708.2	726.3	767.1	813.9	832.0
50°	661.4	684.1	730.9	782.2	801.8
52.5°	614.6	640.3	693.1	750.5	771.6
55°	569.3	593.5	656.9	718.8	741.4
57.5°	519.5	549.7	619.1	685.6	708.2
60°	468.1	501.3	581.4	650.8	675.0
62.5°	416.8	454.5	545.1	614.6	640.3
65°	365.4	407.7	502.8	576.8	602.5
67.5°	315.6	362.4	463.6	537.6	563.3
70°	258.2	317.1	421.3	493.8	519.5
72.5°	205.4	273.3	380.5	448.5	471.1
75°	158.6	231.0	335.2	397.1	406.2
77.5°	116.3	188.8	288.4	309.6	311.1
80°	78.5	151.0	220.5	217.4	220.5
82.5°	51.3	113.3	138.9	155.5	157.0
85°	30.2	66.4	81.5	90.6	92.1
87.5°	15.1	22.7	28.7	30.2	33.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)