

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: P313997

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-CA125-W2A-U-4000K**

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: P313997  
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: 24FCZ2-50HE-UNV-L83050-CA125-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET  
Light Source: (336) 4000K 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: 4808.0 lumens  
Efficiency: N/A  
Efficacy: 122.3 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

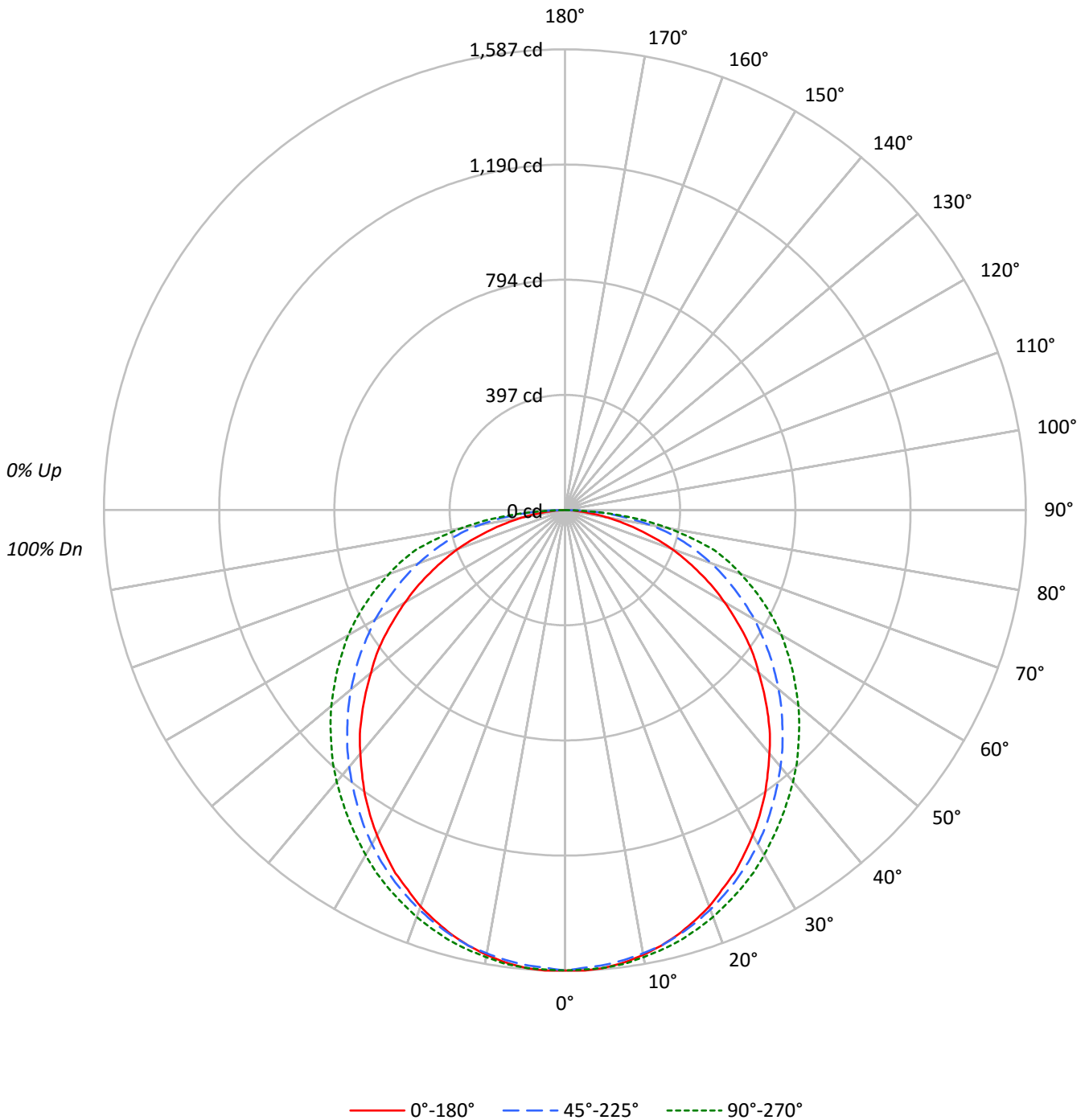
Input Watts (W): 39.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2133	2133	2133
5°	2137	2124	2137
10°	2125	2118	2136
15°	2107	2111	2138
20°	2081	2097	2136
25°	2049	2082	2134
30°	2010	2064	2131
35°	1970	2044	2133
40°	1925	2028	2146
45°	1879	2015	2164
50°	1823	2010	2197
55°	1777	2013	2241
60°	1709	2030	2318
65°	1630	2052	2402
70°	1544	2115	2535
75°	1377	2206	2770
80°	1174	2336	2830
85°	837	2314	2709



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	150.1	3.1
10°-20°	429.1	8.9
20°-30°	648.1	13.5
30°-40°	781.1	16.2
40°-50°	820.0	17.1
50°-60°	767.2	16.0
60°-70°	633.6	13.2
70°-80°	431.7	9.0
80°-90°	147.2	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°	1227.2	25.5
0°-40°	2008.3	41.8
0°-60°	3595.5	74.8
0°-90°	4808.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4808.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1586	1586	1586	1586	1586	
5°	1582	1581	1573	1582	1582	150
15°	1512	1514	1515	1531	1535	426
25°	1380	1386	1402	1429	1437	635
35°	1200	1212	1244	1286	1298	750
45°	987	1008	1059	1117	1137	762
55°	758	788	858	928	956	676
65°	512	555	644	726	754	508
75°	265	325	424	504	533	282
85°	54	107	150	169	176	68
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1585.6	1585.6	1585.6	1585.6	1585.6
2.5°	1587.2	1585.6	1577.7	1585.6	1584.0
5°	1582.4	1580.9	1572.9	1582.4	1582.4
7.5°	1571.3	1571.3	1563.3	1574.5	1576.1
10°	1555.3	1555.3	1550.5	1563.3	1563.3
12.5°	1536.2	1536.2	1536.2	1548.9	1550.5
15°	1512.3	1513.9	1515.4	1531.4	1534.6
17.5°	1483.5	1486.7	1491.5	1510.7	1513.9
20°	1453.2	1456.4	1464.4	1486.7	1491.5
22.5°	1414.9	1422.9	1434.1	1459.6	1464.4
25°	1379.9	1386.2	1402.2	1429.3	1437.3
27.5°	1336.8	1346.4	1367.1	1395.8	1407.0
30°	1293.7	1303.3	1328.8	1362.3	1371.9
32.5°	1247.5	1261.8	1288.9	1324.0	1335.2
35°	1199.6	1212.4	1244.3	1285.7	1298.5
37.5°	1147.0	1164.5	1199.6	1244.3	1260.2
40°	1095.9	1115.1	1154.9	1202.8	1221.9
42.5°	1044.9	1064.0	1108.7	1162.9	1182.0
45°	987.4	1008.2	1059.2	1116.6	1137.4
47.5°	930.0	955.5	1011.4	1072.0	1094.3
50°	871.0	899.7	960.3	1024.1	1049.6
52.5°	818.3	845.5	909.3	977.9	1001.8
55°	757.7	788.0	858.2	928.4	955.5
57.5°	695.5	729.0	804.0	880.6	907.7
60°	634.9	671.6	754.5	831.1	861.4
62.5°	575.9	612.6	698.7	778.5	808.8
65°	512.1	555.1	644.5	725.8	754.5
67.5°	451.4	497.7	591.8	671.6	700.3
70°	392.4	437.1	537.6	615.8	644.5
72.5°	328.6	379.7	480.2	561.5	591.8
75°	264.8	325.4	424.3	504.1	532.8
77.5°	205.8	268.0	366.9	432.3	446.7
80°	151.5	215.4	301.5	347.8	365.3
82.5°	97.3	161.1	229.7	263.2	277.6
85°	54.2	106.9	149.9	169.1	175.5
87.5°	22.3	46.3	60.6	68.6	68.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)