

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: P310900

Luminaire Tested: **24FCZ2-50-UNV-L82765-CA08-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: P310900  
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: 24FCZ2-50-UNV-L82765-CA08-W2A-U-5000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET  
Light Source: (168) 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**

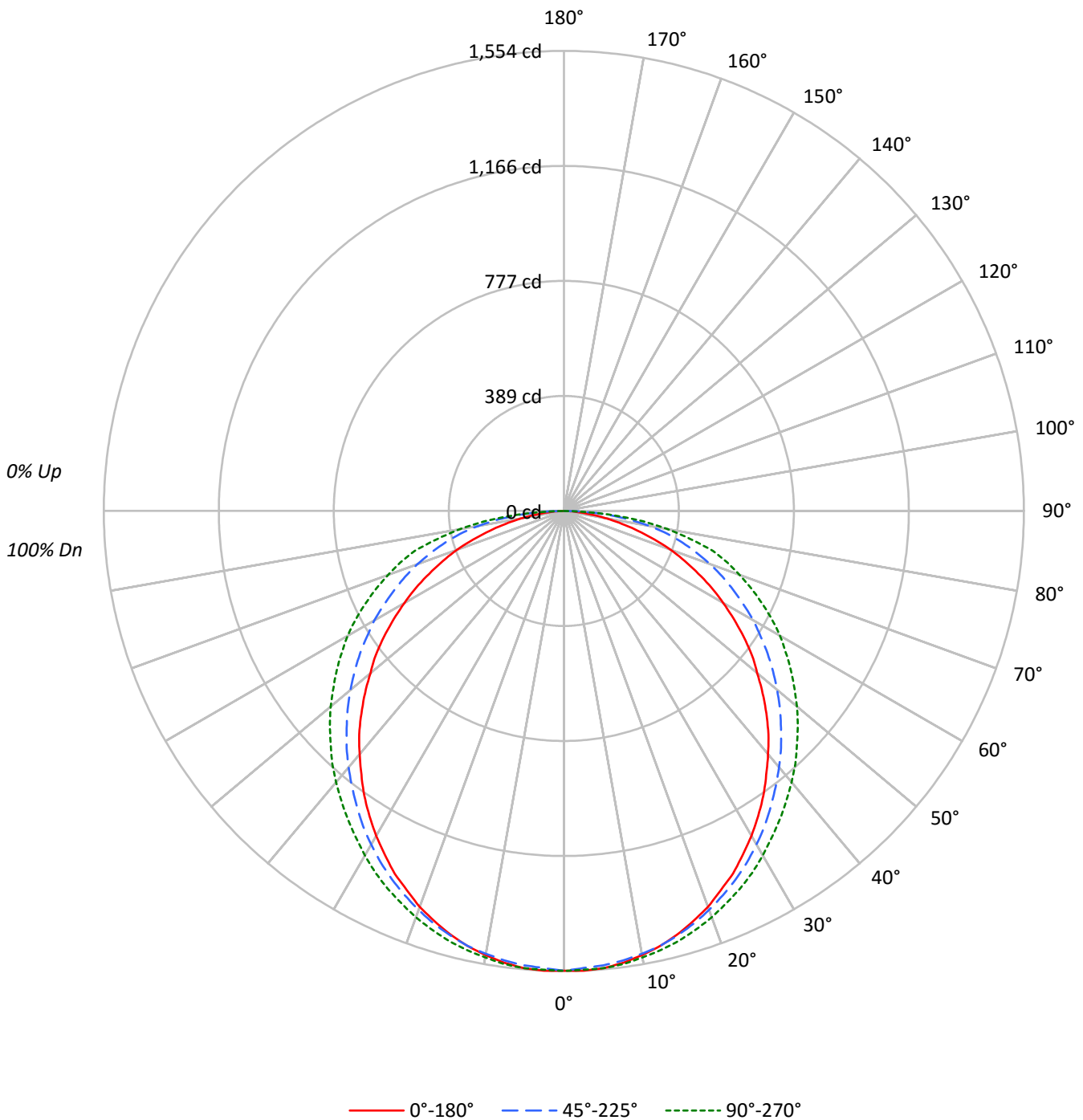
Lumens per Lamp: N/A  
Luminaire Lumens: 4709.0 lumens  
Efficiency: N/A  
Efficacy: 107.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.7  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2090	2090	2090
5°	2093	2081	2093
10°	2081	2075	2092
15°	2063	2067	2094
20°	2038	2054	2092
25°	2006	2039	2090
30°	1969	2022	2087
35°	1930	2002	2089
40°	1885	1987	2102
45°	1840	1974	2120
50°	1786	1969	2152
55°	1741	1972	2195
60°	1673	1989	2270
65°	1597	2010	2353
70°	1512	2071	2483
75°	1349	2161	2713
80°	1150	2288	2772
85°	820	2268	2654



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	147.0	3.1
10°-20°	420.3	8.9
20°-30°	634.7	13.5
30°-40°	765.0	16.2
40°-50°	803.1	17.1
50°-60°	751.4	16.0
60°-70°	620.5	13.2
70°-80°	422.8	9.0
80°-90°	144.2	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°	1202.0	25.5
0°-40°	1967.0	41.8
0°-60°	3521.5	74.8
0°-90°	4709.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4709.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1553	1553	1553	1553	1553	
5°	1550	1548	1540	1550	1550	147
15°	1481	1483	1484	1500	1503	418
25°	1351	1358	1373	1400	1408	622
35°	1175	1187	1219	1259	1272	734
45°	967	987	1037	1094	1114	746
55°	742	772	841	909	936	662
65°	502	544	631	711	739	497
75°	259	319	416	494	522	277
85°	53	105	147	166	172	66
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1553.0	1553.0	1553.0	1553.0	1553.0
2.5°	1554.5	1553.0	1545.2	1553.0	1551.4
5°	1549.9	1548.3	1540.5	1549.9	1549.9
7.5°	1538.9	1538.9	1531.1	1542.1	1543.6
10°	1523.3	1523.3	1518.6	1531.1	1531.1
12.5°	1504.6	1504.6	1504.6	1517.1	1518.6
15°	1481.1	1482.7	1484.2	1499.9	1503.0
17.5°	1453.0	1456.1	1460.8	1479.6	1482.7
20°	1423.3	1426.4	1434.2	1456.1	1460.8
22.5°	1385.8	1393.6	1404.6	1429.6	1434.2
25°	1351.4	1357.7	1373.3	1399.9	1407.7
27.5°	1309.3	1318.6	1338.9	1367.1	1378.0
30°	1267.1	1276.4	1301.4	1334.3	1343.6
32.5°	1221.8	1235.8	1262.4	1296.8	1307.7
35°	1174.9	1187.4	1218.6	1259.3	1271.8
37.5°	1123.3	1140.5	1174.9	1218.6	1234.3
40°	1073.3	1092.1	1131.1	1178.0	1196.8
42.5°	1023.3	1042.1	1085.8	1139.0	1157.7
45°	967.1	987.4	1037.4	1093.7	1114.0
47.5°	910.9	935.9	990.5	1049.9	1071.8
50°	853.0	881.2	940.5	1003.0	1028.0
52.5°	801.5	828.1	890.5	957.7	981.2
55°	742.1	771.8	840.6	909.3	935.9
57.5°	681.2	714.0	787.4	862.4	889.0
60°	621.8	657.8	739.0	814.0	843.7
62.5°	564.0	599.9	684.3	762.4	792.1
65°	501.5	543.7	631.2	710.9	739.0
67.5°	442.1	487.5	579.6	657.8	685.9
70°	384.3	428.1	526.5	603.1	631.2
72.5°	321.8	371.8	470.3	550.0	579.6
75°	259.4	318.7	415.6	493.7	521.8
77.5°	201.5	262.5	359.3	423.4	437.5
80°	148.4	210.9	295.3	340.6	357.8
82.5°	95.3	157.8	225.0	257.8	271.9
85°	53.1	104.7	146.9	165.6	171.9
87.5°	21.9	45.3	59.4	67.2	67.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)