

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: P311575

Luminaire Tested: **24FCZ2-50-UNV-L82765-S-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: P311575  
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: 24FCZ2-50-UNV-L82765-S-CA08-W2A-U-5000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH 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

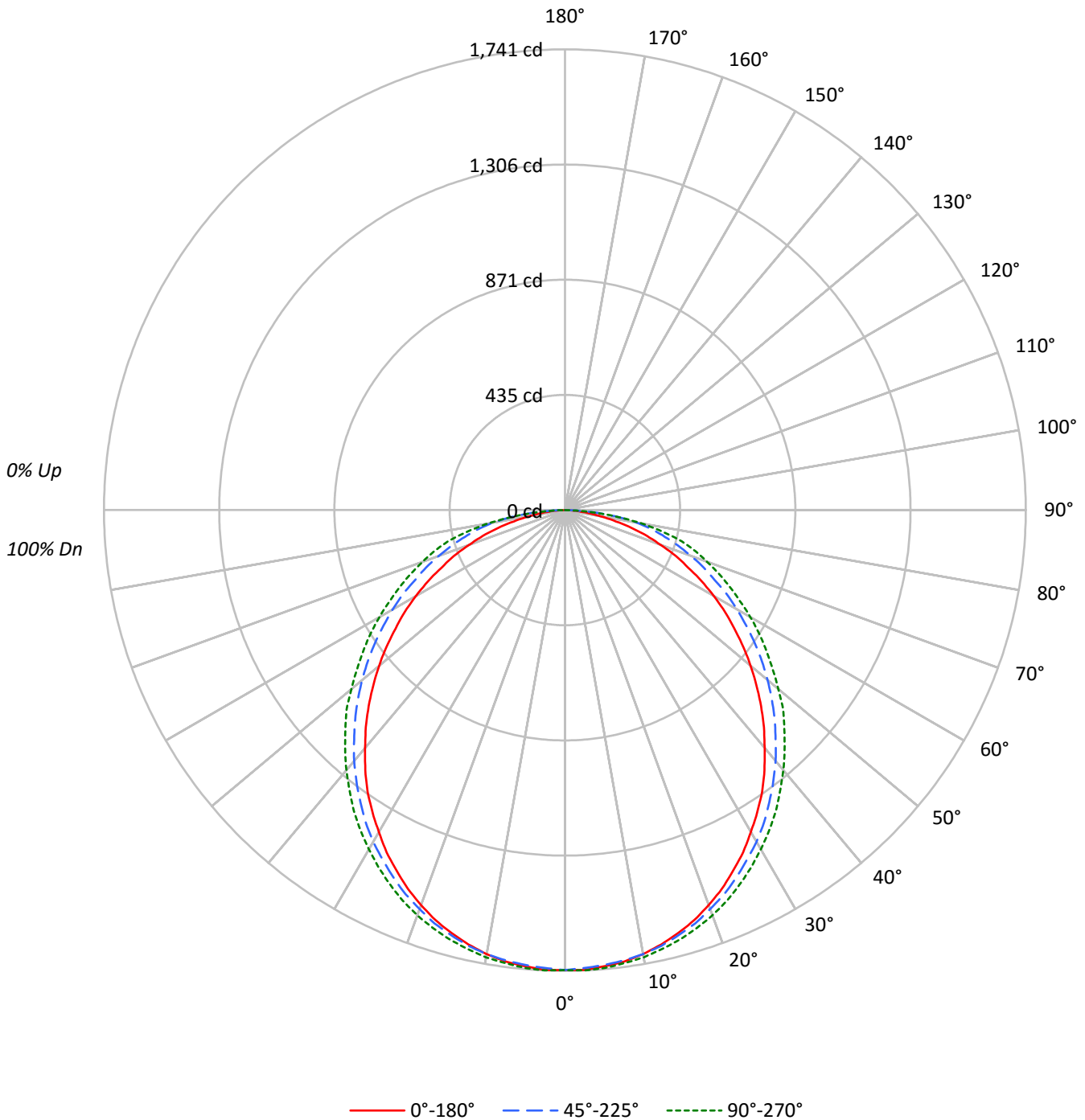
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4947.0 lumens  
Efficiency: N/A  
Efficacy: 113.2 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): 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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2338	2338	2338
5°	2337	2330	2345
10°	2327	2327	2344
15°	2305	2316	2340
20°	2275	2297	2333
25°	2233	2275	2319
30°	2183	2248	2300
35°	2134	2212	2282
40°	2062	2175	2255
45°	1994	2132	2230
50°	1918	2092	2204
55°	1832	2053	2182
60°	1746	2021	2178
65°	1636	1986	2191
70°	1515	1996	2250
75°	1356	2034	2377
80°	1096	2155	2325
85°	824	1893	1843



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	164.5	3.3
10°-20°	470.1	9.5
20°-30°	706.7	14.3
30°-40°	841.8	17.0
40°-50°	861.5	17.4
50°-60°	775.6	15.7
60°-70°	609.1	12.3
70°-80°	395.3	8.0
80°-90°	122.3	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°	1341.3	27.1
0°-40°	2183.1	44.1
0°-60°	3820.3	77.2
0°-90°	4947.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4947.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1738	1738	1738	1738	1738	
5°	1730	1733	1725	1735	1736	164
15°	1655	1659	1662	1677	1680	467
25°	1504	1516	1532	1557	1562	693
35°	1300	1315	1347	1380	1389	811
45°	1048	1073	1120	1163	1172	808
55°	781	816	875	921	930	700
65°	514	553	624	676	688	512
75°	261	311	391	445	457	276
85°	53	99	123	119	119	65
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1737.9	1737.9	1737.9	1737.9	1737.9
2.5°	1739.5	1739.5	1731.6	1739.5	1741.1
5°	1730.1	1733.2	1725.3	1734.8	1736.3
7.5°	1720.6	1720.6	1715.9	1725.3	1726.9
10°	1703.3	1704.9	1703.3	1714.3	1715.9
12.5°	1681.3	1684.5	1686.1	1697.1	1698.6
15°	1654.6	1659.3	1662.5	1676.6	1679.8
17.5°	1624.8	1629.5	1637.3	1653.1	1656.2
20°	1588.6	1594.9	1604.3	1624.8	1629.5
22.5°	1549.4	1555.6	1571.4	1590.2	1598.1
25°	1503.8	1516.4	1532.1	1557.2	1561.9
27.5°	1458.2	1469.2	1489.6	1516.4	1522.6
30°	1404.8	1422.1	1447.2	1473.9	1480.2
32.5°	1352.9	1370.2	1400.1	1428.4	1436.2
35°	1299.5	1315.2	1346.6	1379.6	1389.1
37.5°	1238.2	1258.7	1293.2	1326.2	1335.6
40°	1173.8	1198.9	1238.2	1272.8	1283.8
42.5°	1112.5	1139.2	1178.5	1216.2	1228.8
45°	1048.1	1073.2	1120.4	1162.8	1172.2
47.5°	982.1	1010.4	1060.7	1103.1	1118.8
50°	916.1	946.0	999.4	1043.4	1052.8
52.5°	850.1	881.5	938.1	985.2	990.0
55°	781.0	815.5	875.2	920.8	930.2
57.5°	718.1	748.0	812.4	859.5	870.5
60°	649.0	682.0	751.1	795.1	809.2
62.5°	583.0	617.5	689.8	733.8	746.4
65°	513.8	553.1	623.8	675.7	688.3
67.5°	454.1	491.8	567.3	617.5	630.1
70°	385.0	427.4	507.5	559.4	572.0
72.5°	325.3	369.3	449.4	499.7	518.5
75°	260.8	311.1	391.3	444.7	457.3
77.5°	198.0	256.1	337.8	378.7	378.7
80°	141.4	202.7	278.1	297.0	300.1
82.5°	92.7	152.4	205.8	204.3	204.3
85°	53.4	99.0	122.6	119.4	119.4
87.5°	20.4	40.9	44.0	44.0	42.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)