

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: P314391

Luminaire Tested: **24FCZ2-50-UNV-L83050-S-CA08-W2A-U-3500K**

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: P314391  
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-L83050-S-CA08-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET  
Light Source: (168) 3500K 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**

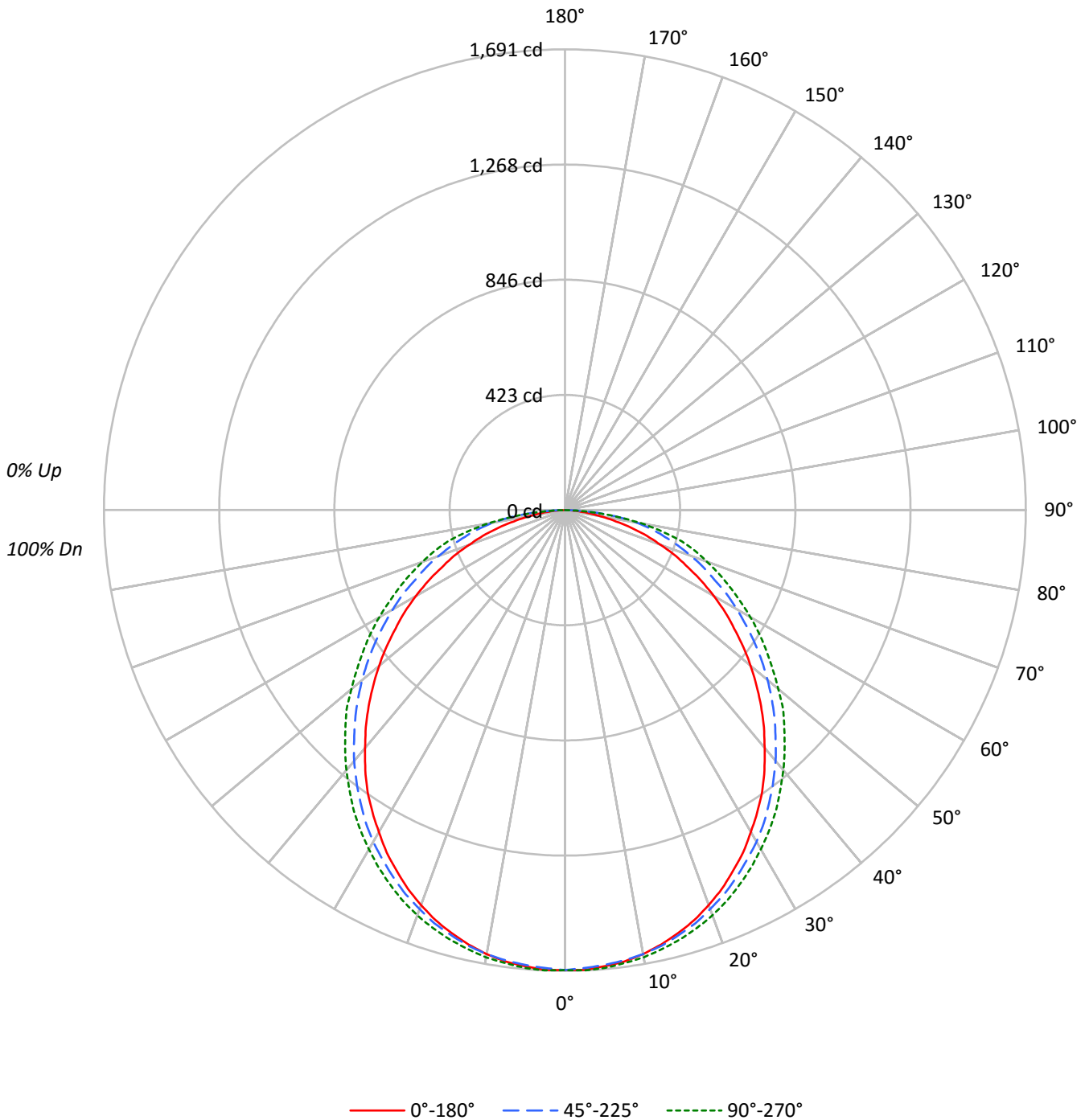
Lumens per Lamp: N/A  
Luminaire Lumens: 4805.0 lumens  
Efficiency: N/A  
Efficacy: 112.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 42.7  
Input Voltage (V): NR  
Input Current (A<sub>in</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



TEST NUMBER: P314391

CATALOG NUMBER: 24FCZ2-50-UNV-L83050-S-CA08-W2A-U-3500K

### Luminous Intensity Polar Plot





TEST NUMBER: P314391

CATALOG NUMBER: 24FCZ2-50-UNV-L83050-S-CA08-W2A-U-3500K

**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°	2271	2271	2271
5°	2270	2263	2278
10°	2260	2260	2277
15°	2239	2249	2273
20°	2209	2231	2266
25°	2168	2209	2252
30°	2120	2184	2234
35°	2073	2148	2216
40°	2002	2112	2190
45°	1937	2071	2167
50°	1863	2032	2141
55°	1779	1994	2119
60°	1696	1963	2115
65°	1589	1929	2128
70°	1471	1939	2186
75°	1317	1975	2309
80°	1065	2093	2259
85°	801	1837	1791



TEST NUMBER: P314391

CATALOG NUMBER: 24FCZ2-50-UNV-L83050-S-CA08-W2A-U-3500K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	159.8	3.3
10°-20°	456.6	9.5
20°-30°	686.4	14.3
30°-40°	817.6	17.0
40°-50°	836.8	17.4
50°-60°	753.4	15.7
60°-70°	591.6	12.3
70°-80°	384.0	8.0
80°-90°	118.7	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°	1302.8	27.1
0°-40°	2120.5	44.1
0°-60°	3710.6	77.2
0°-90°	4805.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4805.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1688	1688	1688	1688	1688	
5°	1680	1683	1676	1685	1686	160
15°	1607	1612	1615	1628	1632	453
25°	1461	1473	1488	1512	1517	673
35°	1262	1278	1308	1340	1349	787
45°	1018	1042	1088	1129	1139	785
55°	758	792	850	894	904	680
65°	499	537	606	656	668	497
75°	253	302	380	432	444	268
85°	52	96	119	116	116	63
90°	0	0	0	0	0	



TEST NUMBER: P314391

CATALOG NUMBER: 24FCZ2-50-UNV-L83050-S-CA08-W2A-U-3500K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1688.0	1688.0	1688.0	1688.0	1688.0
2.5°	1689.6	1689.6	1681.9	1689.6	1691.1
5°	1680.4	1683.4	1675.8	1685.0	1686.5
7.5°	1671.2	1671.2	1666.7	1675.8	1677.3
10°	1654.5	1656.0	1654.5	1665.1	1666.7
12.5°	1633.1	1636.1	1637.7	1648.3	1649.9
15°	1607.1	1611.7	1614.8	1628.5	1631.6
17.5°	1578.1	1582.7	1590.3	1605.6	1608.7
20°	1543.0	1549.1	1558.3	1578.1	1582.7
22.5°	1504.9	1511.0	1526.2	1544.6	1552.2
25°	1460.6	1472.8	1488.1	1512.5	1517.1
27.5°	1416.4	1427.0	1446.9	1472.8	1478.9
30°	1364.5	1381.3	1405.7	1431.6	1437.7
32.5°	1314.1	1330.9	1359.9	1387.4	1395.0
35°	1262.2	1277.5	1308.0	1340.0	1349.2
37.5°	1202.7	1222.5	1256.1	1288.2	1297.3
40°	1140.1	1164.5	1202.7	1236.3	1246.9
42.5°	1080.6	1106.5	1144.7	1181.3	1193.5
45°	1018.0	1042.4	1088.2	1129.4	1138.6
47.5°	953.9	981.4	1030.2	1071.4	1086.7
50°	889.8	918.8	970.7	1013.4	1022.6
52.5°	825.7	856.2	911.2	957.0	961.5
55°	758.5	792.1	850.1	894.4	903.5
57.5°	697.5	726.5	789.1	834.9	845.5
60°	630.3	662.4	729.5	772.3	786.0
62.5°	566.2	599.8	670.0	712.8	725.0
65°	499.1	537.2	605.9	656.3	668.5
67.5°	441.1	477.7	551.0	599.8	612.0
70°	373.9	415.1	493.0	543.3	555.6
72.5°	315.9	358.7	436.5	485.3	503.7
75°	253.4	302.2	380.0	431.9	444.1
77.5°	192.3	248.8	328.1	367.8	367.8
80°	137.4	196.9	270.1	288.5	291.5
82.5°	90.0	148.0	199.9	198.4	198.4
85°	51.9	96.2	119.0	116.0	116.0
87.5°	19.8	39.7	42.7	42.7	41.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)