

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: P314398

Luminaire Tested: **24FCZ2-50-UNV-L83050-S-CA125-W2A-U-4500K**

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: P314398  
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-CA125-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET  
Light Source: (168) 4500K 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**

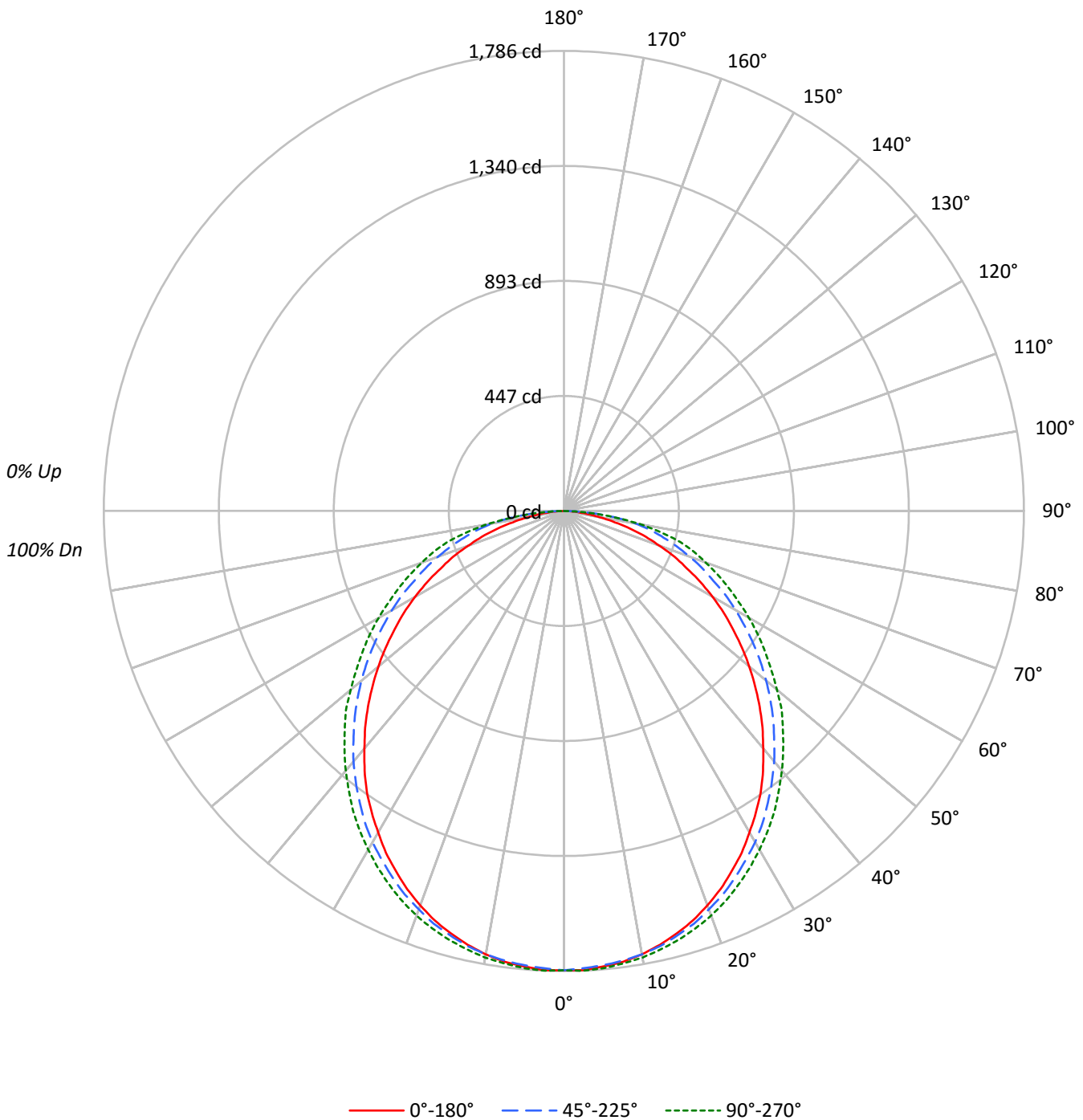
Lumens per Lamp: N/A  
Luminaire Lumens: 5075.0 lumens  
Efficiency: N/A  
Efficacy: 113.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 44.8  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2399	2399	2399
5°	2397	2391	2406
10°	2387	2387	2405
15°	2364	2376	2400
20°	2333	2357	2394
25°	2290	2333	2379
30°	2239	2307	2359
35°	2190	2269	2341
40°	2115	2231	2313
45°	2046	2187	2288
50°	1967	2146	2261
55°	1879	2106	2239
60°	1792	2073	2234
65°	1678	2038	2248
70°	1554	2048	2308
75°	1391	2087	2439
80°	1124	2211	2386
85°	846	1941	1891



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	168.8	3.3
10°-20°	482.3	9.5
20°-30°	725.0	14.3
30°-40°	863.6	17.0
40°-50°	883.8	17.4
50°-60°	795.7	15.7
60°-70°	624.9	12.3
70°-80°	405.6	8.0
80°-90°	125.4	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°	1376.0	27.1
0°-40°	2239.6	44.1
0°-60°	3919.1	77.2
0°-90°	5075.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5075.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1783	1783	1783	1783	1783	
5°	1775	1778	1770	1780	1781	169
15°	1697	1702	1706	1720	1723	479
25°	1543	1556	1572	1598	1602	711
35°	1333	1349	1382	1415	1425	832
45°	1075	1101	1149	1193	1203	829
55°	801	837	898	945	954	718
65°	527	567	640	693	706	525
75°	268	319	401	456	469	283
85°	55	102	126	122	122	66
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1782.9	1782.9	1782.9	1782.9	1782.9
2.5°	1784.5	1784.5	1776.4	1784.5	1786.1
5°	1774.8	1778.0	1770.0	1779.7	1781.3
7.5°	1765.1	1765.1	1760.3	1770.0	1771.6
10°	1747.4	1749.0	1747.4	1758.7	1760.3
12.5°	1724.8	1728.1	1729.7	1741.0	1742.6
15°	1697.4	1702.3	1705.5	1720.0	1723.2
17.5°	1666.8	1671.7	1679.7	1695.8	1699.1
20°	1629.7	1636.2	1645.9	1666.8	1671.7
22.5°	1589.4	1595.9	1612.0	1631.4	1639.4
25°	1542.7	1555.6	1571.7	1597.5	1602.3
27.5°	1495.9	1507.2	1528.2	1555.6	1562.0
30°	1441.1	1458.9	1484.7	1512.1	1518.5
32.5°	1387.9	1405.7	1436.3	1465.3	1473.4
35°	1333.1	1349.3	1381.5	1415.3	1425.0
37.5°	1270.3	1291.2	1326.7	1360.5	1370.2
40°	1204.2	1230.0	1270.3	1305.7	1317.0
42.5°	1141.3	1168.7	1209.0	1247.7	1260.6
45°	1075.2	1101.0	1149.4	1192.9	1202.6
47.5°	1007.5	1036.5	1088.1	1131.6	1147.7
50°	939.8	970.4	1025.2	1070.4	1080.0
52.5°	872.1	904.3	962.4	1010.7	1015.6
55°	801.2	836.6	897.9	944.6	954.3
57.5°	736.7	767.3	833.4	881.8	893.1
60°	665.8	699.6	770.5	815.7	830.2
62.5°	598.1	633.5	707.7	752.8	765.7
65°	527.1	567.4	640.0	693.2	706.1
67.5°	465.9	504.6	581.9	633.5	646.4
70°	394.9	438.5	520.7	573.9	586.8
72.5°	333.7	378.8	461.0	512.6	532.0
75°	267.6	319.2	401.4	456.2	469.1
77.5°	203.1	262.8	346.6	388.5	388.5
80°	145.1	207.9	285.3	304.7	307.9
82.5°	95.1	156.4	211.2	209.6	209.6
85°	54.8	101.6	125.7	122.5	122.5
87.5°	21.0	41.9	45.1	45.1	43.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)