

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: P311587

Luminaire Tested: **24FCZ2-50-UNV-L82765-S-CA125-W2A-U-6500K**

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: P311587  
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-CA125-W2A-U-6500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET  
Light Source: (168) 6500K 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**

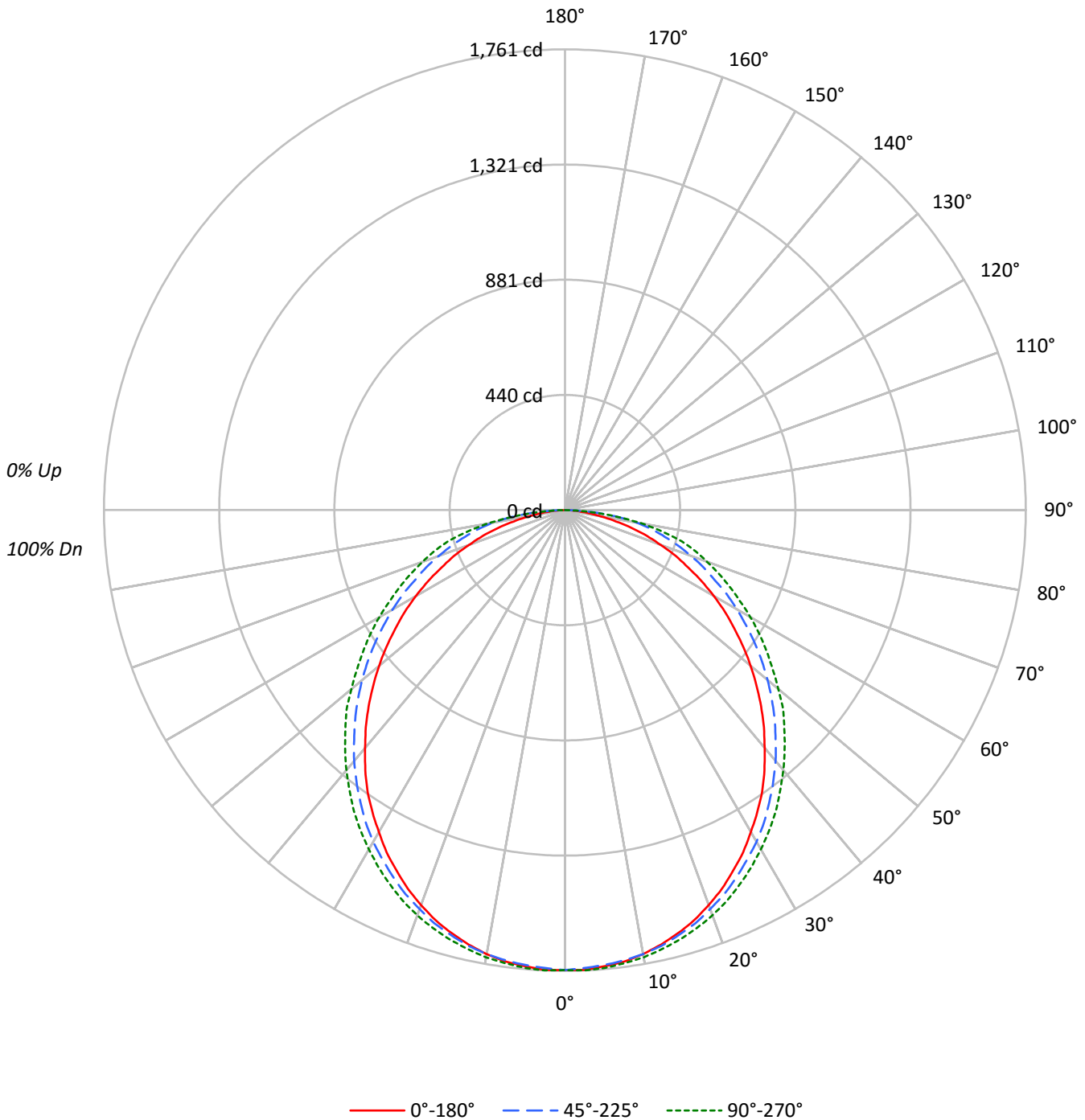
Lumens per Lamp: N/A  
Luminaire Lumens: 5004.0 lumens  
Efficiency: N/A  
Efficacy: 112.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 44.6  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2365	2365	2365
5°	2364	2357	2372
10°	2354	2354	2371
15°	2331	2342	2367
20°	2301	2324	2360
25°	2258	2301	2345
30°	2208	2274	2326
35°	2159	2237	2308
40°	2085	2200	2281
45°	2017	2156	2256
50°	1940	2116	2229
55°	1853	2077	2207
60°	1766	2045	2203
65°	1655	2009	2216
70°	1532	2020	2276
75°	1371	2058	2404
80°	1109	2180	2352
85°	834	1914	1865



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	166.4	3.3
10°-20°	475.5	9.5
20°-30°	714.8	14.3
30°-40°	851.5	17.0
40°-50°	871.5	17.4
50°-60°	784.6	15.7
60°-70°	616.2	12.3
70°-80°	399.9	8.0
80°-90°	123.7	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°	1356.8	27.1
0°-40°	2208.3	44.1
0°-60°	3864.3	77.2
0°-90°	5004.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5004.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1758	1758	1758	1758	1758	
5°	1750	1753	1745	1755	1756	166
15°	1674	1678	1682	1696	1699	472
25°	1521	1534	1550	1575	1580	701
35°	1314	1330	1362	1396	1405	820
45°	1060	1086	1133	1176	1186	817
55°	790	825	885	931	941	708
65°	520	560	631	684	696	517
75°	264	315	396	450	462	279
85°	54	100	124	121	121	65
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1757.9	1757.9	1757.9	1757.9	1757.9
2.5°	1759.5	1759.5	1751.6	1759.5	1761.1
5°	1750.0	1753.2	1745.2	1754.8	1756.3
7.5°	1740.5	1740.5	1735.7	1745.2	1746.8
10°	1723.0	1724.6	1723.0	1734.1	1735.7
12.5°	1700.7	1703.9	1705.5	1716.6	1718.2
15°	1673.7	1678.5	1681.6	1695.9	1699.1
17.5°	1643.5	1648.3	1656.2	1672.1	1675.3
20°	1606.9	1613.3	1622.8	1643.5	1648.3
22.5°	1567.2	1573.6	1589.5	1608.5	1616.5
25°	1521.1	1533.8	1549.7	1575.2	1579.9
27.5°	1475.0	1486.1	1506.8	1533.8	1540.2
30°	1421.0	1438.5	1463.9	1490.9	1497.3
32.5°	1368.5	1386.0	1416.2	1444.8	1452.8
35°	1314.5	1330.4	1362.2	1395.5	1405.1
37.5°	1252.5	1273.2	1308.1	1341.5	1351.0
40°	1187.3	1212.8	1252.5	1287.5	1298.6
42.5°	1125.3	1152.4	1192.1	1230.2	1243.0
45°	1060.2	1085.6	1133.3	1176.2	1185.7
47.5°	993.4	1022.0	1072.9	1115.8	1131.7
50°	926.7	956.9	1010.9	1055.4	1064.9
52.5°	859.9	891.7	948.9	996.6	1001.4
55°	790.0	824.9	885.3	931.4	941.0
57.5°	726.4	756.6	821.7	869.4	880.6
60°	656.4	689.8	759.8	804.3	818.6
62.5°	589.7	624.7	697.8	742.3	755.0
65°	519.8	559.5	631.0	683.5	696.2
67.5°	459.4	497.5	573.8	624.7	637.4
70°	389.4	432.3	513.4	565.8	578.6
72.5°	329.0	373.5	454.6	505.4	524.5
75°	263.8	314.7	395.8	449.8	462.5
77.5°	200.3	259.1	341.7	383.1	383.1
80°	143.1	205.0	281.3	300.4	303.6
82.5°	93.8	154.2	208.2	206.6	206.6
85°	54.0	100.1	124.0	120.8	120.8
87.5°	20.7	41.3	44.5	44.5	42.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)