

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: P311573

Luminaire Tested: **24FCZ2-50-UNV-L82765-S-CA08-W2A-U-4000K**

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: P311573  
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-4000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET  
Light Source: (168) 4000K 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**

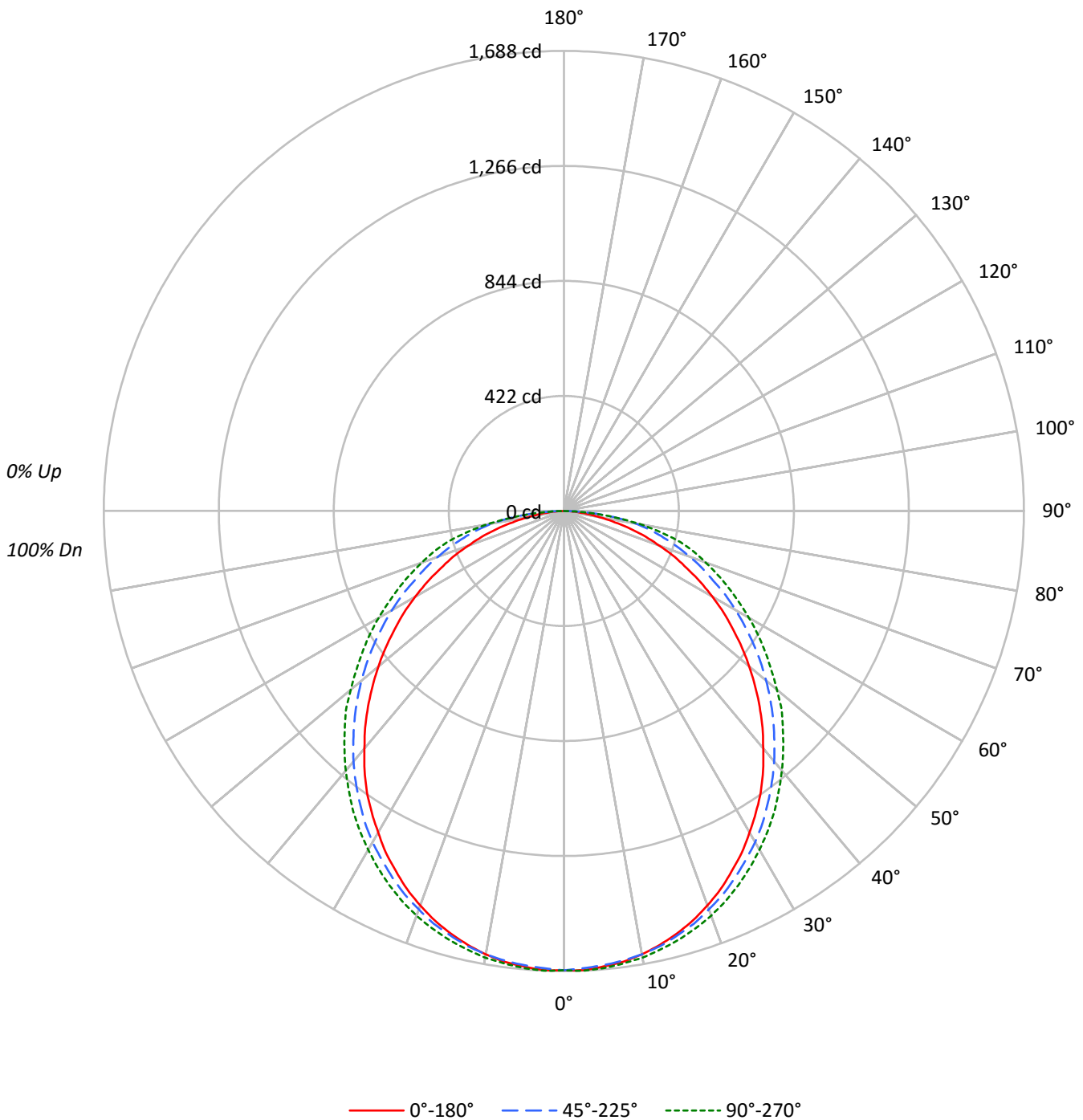
Lumens per Lamp: N/A  
Luminaire Lumens: 4797.0 lumens  
Efficiency: N/A  
Efficacy: 111.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.2  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2267	2267	2267
5°	2266	2260	2274
10°	2257	2257	2273
15°	2235	2246	2269
20°	2206	2228	2262
25°	2165	2205	2249
30°	2116	2180	2230
35°	2070	2145	2213
40°	1999	2109	2187
45°	1934	2067	2163
50°	1859	2029	2137
55°	1776	1991	2116
60°	1693	1960	2112
65°	1586	1926	2125
70°	1469	1936	2182
75°	1315	1972	2305
80°	1062	2090	2255
85°	800	1834	1788



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	159.5	3.3
10°-20°	455.9	9.5
20°-30°	685.3	14.3
30°-40°	816.3	17.0
40°-50°	835.4	17.4
50°-60°	752.1	15.7
60°-70°	590.6	12.3
70°-80°	383.3	8.0
80°-90°	118.6	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°	1300.7	27.1
0°-40°	2116.9	44.1
0°-60°	3704.5	77.2
0°-90°	4797.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4797.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1685	1685	1685	1685	1685	
5°	1678	1681	1673	1682	1684	159
15°	1604	1609	1612	1626	1629	452
25°	1458	1470	1486	1510	1515	672
35°	1260	1275	1306	1338	1347	786
45°	1016	1041	1086	1128	1137	784
55°	757	791	849	893	902	679
65°	498	536	605	655	667	496
75°	253	302	379	431	443	268
85°	52	96	119	116	116	63
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1685.2	1685.2	1685.2	1685.2	1685.2
2.5°	1686.7	1686.7	1679.1	1686.7	1688.3
5°	1677.6	1680.6	1673.0	1682.2	1683.7
7.5°	1668.5	1668.5	1663.9	1673.0	1674.6
10°	1651.7	1653.2	1651.7	1662.4	1663.9
12.5°	1630.4	1633.4	1634.9	1645.6	1647.1
15°	1604.5	1609.0	1612.1	1625.8	1628.8
17.5°	1575.5	1580.1	1587.7	1602.9	1606.0
20°	1540.5	1546.6	1555.7	1575.5	1580.1
22.5°	1502.4	1508.5	1523.7	1542.0	1549.6
25°	1458.2	1470.4	1485.6	1510.0	1514.6
27.5°	1414.0	1424.7	1444.5	1470.4	1476.5
30°	1362.2	1379.0	1403.3	1429.2	1435.3
32.5°	1311.9	1328.7	1357.6	1385.0	1392.7
35°	1260.1	1275.3	1305.8	1337.8	1347.0
37.5°	1200.7	1220.5	1254.0	1286.0	1295.1
40°	1138.2	1162.6	1200.7	1234.2	1244.9
42.5°	1078.8	1104.7	1142.8	1179.3	1191.5
45°	1016.3	1040.7	1086.4	1127.5	1136.7
47.5°	952.3	979.7	1028.5	1069.6	1084.9
50°	888.3	917.3	969.1	1011.7	1020.9
52.5°	824.3	854.8	909.7	955.4	959.9
55°	757.3	790.8	848.7	892.9	902.0
57.5°	696.3	725.3	787.8	833.5	844.1
60°	629.3	661.3	728.3	771.0	784.7
62.5°	565.3	598.8	668.9	711.6	723.8
65°	498.3	536.3	604.9	655.2	667.4
67.5°	440.4	476.9	550.1	598.8	611.0
70°	373.3	414.4	492.2	542.4	554.6
72.5°	315.4	358.1	435.8	484.5	502.8
75°	252.9	301.7	379.4	431.2	443.4
77.5°	192.0	248.4	327.6	367.2	367.2
80°	137.1	196.6	269.7	288.0	291.0
82.5°	89.9	147.8	199.6	198.1	198.1
85°	51.8	96.0	118.8	115.8	115.8
87.5°	19.8	39.6	42.7	42.7	41.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)