

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: P311576

Luminaire Tested: **24FCZ2-50-UNV-L82765-S-CA08-W2A-U-5500K**

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: P311576  
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-5500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET  
Light Source: (168) 5500K 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**

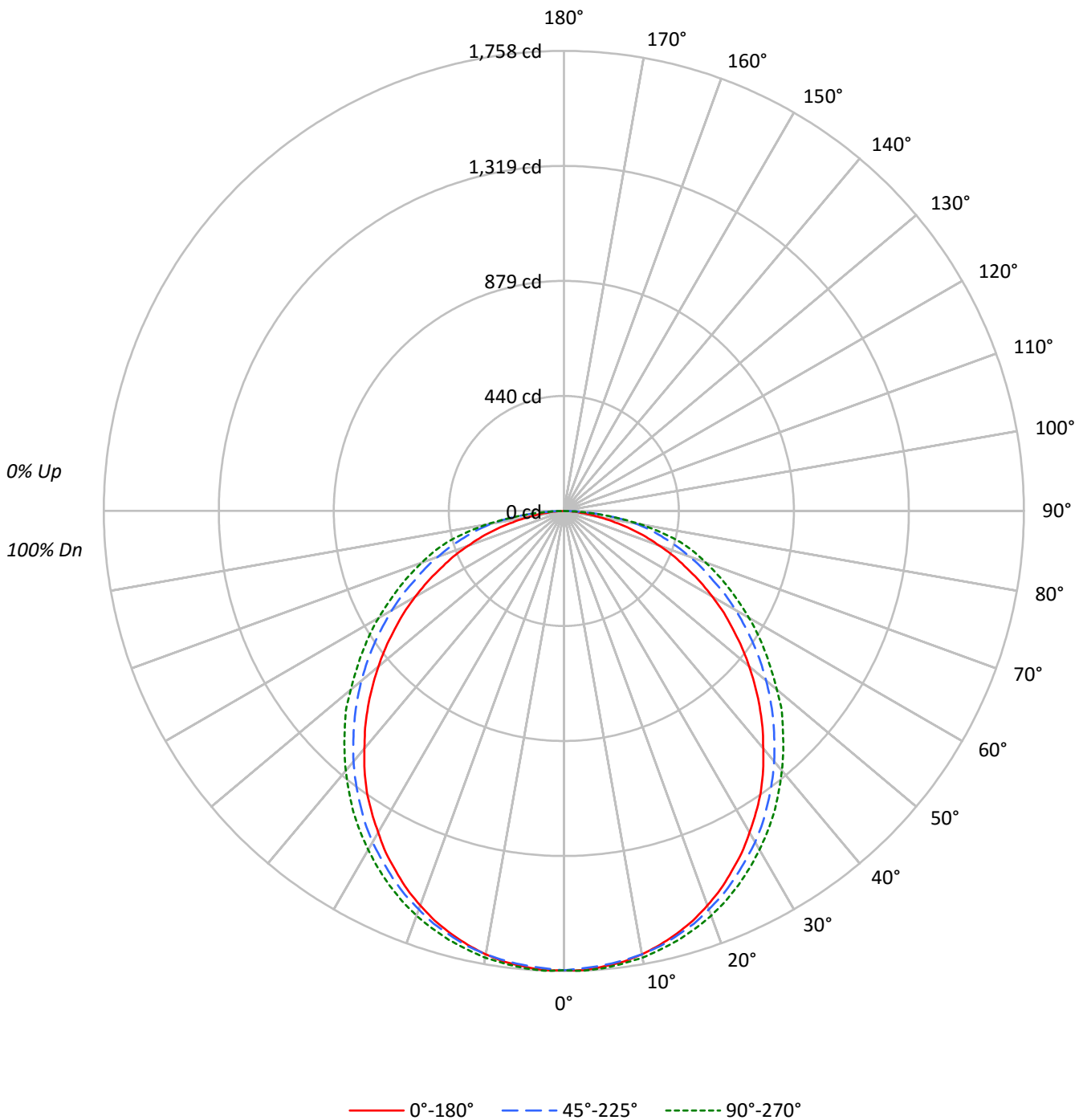
Lumens per Lamp: N/A  
Luminaire Lumens: 4996.0 lumens  
Efficiency: N/A  
Efficacy: 113.8 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.9  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2361	2361	2361
5°	2360	2353	2368
10°	2350	2350	2368
15°	2328	2339	2363
20°	2297	2320	2356
25°	2255	2297	2342
30°	2204	2271	2323
35°	2156	2234	2304
40°	2082	2196	2277
45°	2014	2153	2253
50°	1937	2113	2226
55°	1850	2073	2204
60°	1764	2041	2199
65°	1652	2006	2213
70°	1530	2017	2272
75°	1369	2054	2401
80°	1106	2177	2349
85°	834	1911	1862



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	166.2	3.3
10°-20°	474.8	9.5
20°-30°	713.7	14.3
30°-40°	850.1	17.0
40°-50°	870.1	17.4
50°-60°	783.3	15.7
60°-70°	615.2	12.3
70°-80°	399.2	8.0
80°-90°	123.5	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°	1354.6	27.1
0°-40°	2204.7	44.1
0°-60°	3858.1	77.2
0°-90°	4996.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4996.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1755	1755	1755	1755	1755	
5°	1747	1750	1742	1752	1754	166
15°	1671	1676	1679	1693	1696	471
25°	1519	1531	1547	1573	1577	700
35°	1312	1328	1360	1393	1403	819
45°	1058	1084	1132	1174	1184	816
55°	789	824	884	930	940	707
65°	519	559	630	682	695	517
75°	263	314	395	449	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°	1755.1	1755.1	1755.1	1755.1	1755.1
2.5°	1756.7	1756.7	1748.8	1756.7	1758.3
5°	1747.2	1750.4	1742.4	1752.0	1753.5
7.5°	1737.7	1737.7	1732.9	1742.4	1744.0
10°	1720.2	1721.8	1720.2	1731.3	1732.9
12.5°	1698.0	1701.2	1702.8	1713.9	1715.5
15°	1671.0	1675.8	1679.0	1693.2	1696.4
17.5°	1640.9	1645.6	1653.6	1669.4	1672.6
20°	1604.4	1610.7	1620.2	1640.9	1645.6
22.5°	1564.7	1571.0	1586.9	1606.0	1613.9
25°	1518.7	1531.4	1547.2	1572.6	1577.4
27.5°	1472.7	1483.8	1504.4	1531.4	1537.7
30°	1418.7	1436.2	1461.5	1488.5	1494.9
32.5°	1366.3	1383.8	1413.9	1442.5	1450.4
35°	1312.4	1328.2	1360.0	1393.3	1402.8
37.5°	1250.5	1271.1	1306.0	1339.4	1348.9
40°	1185.4	1210.8	1250.5	1285.4	1296.5
42.5°	1123.5	1150.5	1190.2	1228.3	1241.0
45°	1058.5	1083.9	1131.5	1174.3	1183.8
47.5°	991.8	1020.4	1071.2	1114.0	1129.9
50°	925.2	955.3	1009.3	1053.7	1063.2
52.5°	858.5	890.3	947.4	995.0	999.8
55°	788.7	823.6	883.9	929.9	939.5
57.5°	725.2	755.4	820.4	868.0	879.2
60°	655.4	688.7	758.5	803.0	817.3
62.5°	588.7	623.7	696.7	741.1	753.8
65°	518.9	558.6	630.0	682.4	695.1
67.5°	458.6	496.7	572.9	623.7	636.4
70°	388.8	431.6	512.6	564.9	577.6
72.5°	328.5	372.9	453.9	504.6	523.7
75°	263.4	314.2	395.1	449.1	461.8
77.5°	200.0	258.7	341.2	382.4	382.4
80°	142.8	204.7	280.9	299.9	303.1
82.5°	93.6	153.9	207.9	206.3	206.3
85°	54.0	100.0	123.8	120.6	120.6
87.5°	20.6	41.3	44.4	44.4	42.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)