

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: P314366

Luminaire Tested: **24FCZ2-50HE-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: P314366  
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: 24FCZ2-50HE-UNV-L83050-S-CA08-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET  
Light Source: (336) 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**

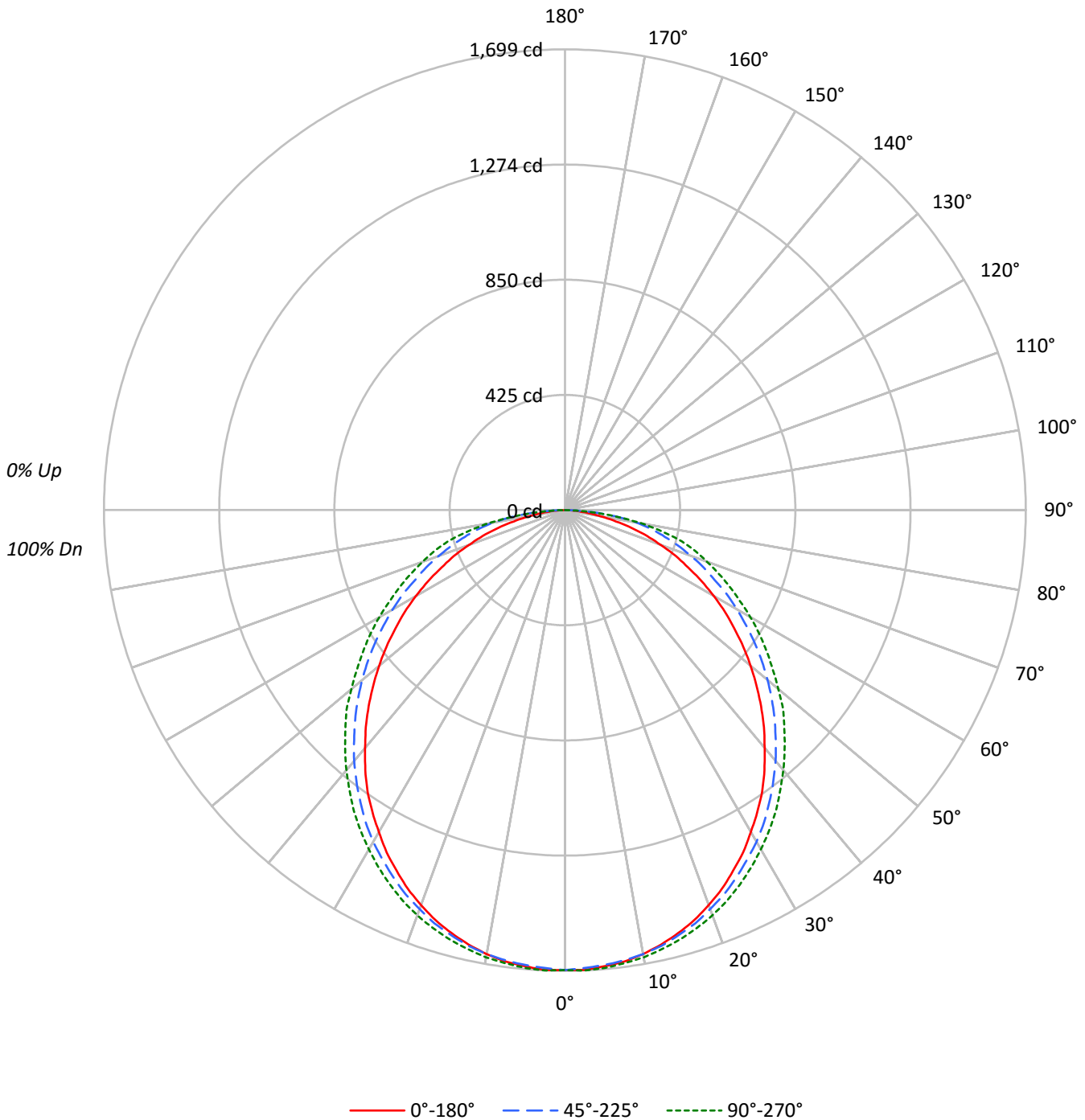
Lumens per Lamp: N/A  
Luminaire Lumens: 4828.0 lumens  
Efficiency: N/A  
Efficacy: 125.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 38.4  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2282	2282	2282
5°	2280	2274	2289
10°	2271	2271	2288
15°	2249	2260	2284
20°	2220	2242	2277
25°	2179	2220	2263
30°	2130	2194	2244
35°	2083	2159	2227
40°	2012	2122	2201
45°	1946	2081	2177
50°	1872	2042	2151
55°	1788	2004	2130
60°	1704	1972	2125
65°	1597	1938	2138
70°	1478	1948	2196
75°	1324	1985	2320
80°	1069	2103	2269
85°	804	1846	1798



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	160.6	3.3
10°-20°	458.8	9.5
20°-30°	689.7	14.3
30°-40°	821.5	17.0
40°-50°	840.8	17.4
50°-60°	757.0	15.7
60°-70°	594.5	12.3
70°-80°	385.8	8.0
80°-90°	119.3	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°	1309.1	27.1
0°-40°	2130.6	44.1
0°-60°	3728.4	77.2
0°-90°	4828.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4828.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1696	1696	1696	1696	1696	
5°	1688	1692	1684	1693	1695	160
15°	1615	1619	1622	1636	1639	455
25°	1468	1480	1495	1520	1524	676
35°	1268	1284	1314	1346	1356	791
45°	1023	1047	1093	1135	1144	789
55°	762	796	854	899	908	683
65°	502	540	609	659	672	499
75°	255	304	382	434	446	269
85°	52	97	120	116	116	63
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1696.1	1696.1	1696.1	1696.1	1696.1
2.5°	1697.6	1697.6	1690.0	1697.6	1699.2
5°	1688.4	1691.5	1683.8	1693.0	1694.6
7.5°	1679.2	1679.2	1674.6	1683.8	1685.4
10°	1662.4	1663.9	1662.4	1673.1	1674.6
12.5°	1640.9	1644.0	1645.5	1656.2	1657.8
15°	1614.8	1619.4	1622.5	1636.3	1639.4
17.5°	1585.7	1590.3	1598.0	1613.3	1616.4
20°	1550.4	1556.6	1565.8	1585.7	1590.3
22.5°	1512.1	1518.2	1533.6	1552.0	1559.6
25°	1467.6	1479.9	1495.2	1519.7	1524.4
27.5°	1423.1	1433.9	1453.8	1479.9	1486.0
30°	1371.0	1387.9	1412.4	1438.5	1444.6
32.5°	1320.4	1337.3	1366.4	1394.0	1401.7
35°	1268.2	1283.6	1314.3	1346.5	1355.7
37.5°	1208.4	1228.4	1262.1	1294.3	1303.5
40°	1145.6	1170.1	1208.4	1242.2	1252.9
42.5°	1085.8	1111.8	1150.2	1187.0	1199.2
45°	1022.9	1047.4	1093.4	1134.8	1144.0
47.5°	958.5	986.1	1035.1	1076.6	1091.9
50°	894.1	923.2	975.3	1018.3	1027.5
52.5°	829.7	860.3	915.5	961.5	966.1
55°	762.2	795.9	854.2	898.7	907.9
57.5°	700.8	730.0	792.8	838.9	849.6
60°	633.4	665.6	733.0	776.0	789.8
62.5°	568.9	602.7	673.2	716.2	728.4
65°	501.5	539.8	608.8	659.4	671.7
67.5°	443.2	480.0	553.6	602.7	615.0
70°	375.7	417.1	495.3	545.9	558.2
72.5°	317.4	360.4	438.6	487.7	506.1
75°	254.6	303.6	381.9	434.0	446.3
77.5°	193.2	250.0	329.7	369.6	369.6
80°	138.0	197.8	271.4	289.8	292.9
82.5°	90.5	148.8	200.9	199.4	199.4
85°	52.1	96.6	119.6	116.5	116.5
87.5°	19.9	39.9	42.9	42.9	41.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)