

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: P311529

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-S-CA08-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: P311529  
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-L82765-S-CA08-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET  
Light Source: (336) 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**

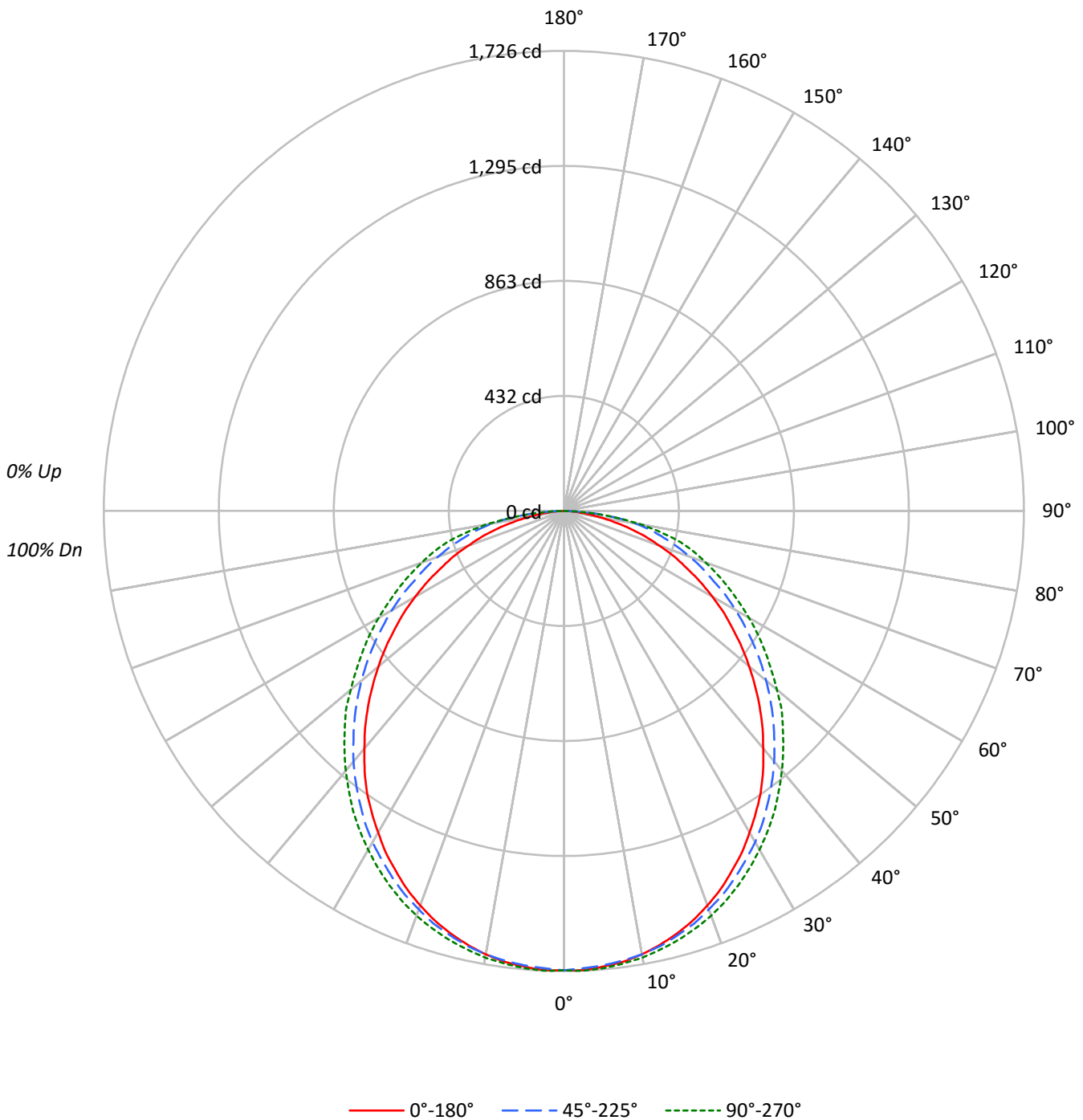
Lumens per Lamp: N/A  
Luminaire Lumens: 4905.0 lumens  
Efficiency: N/A  
Efficacy: 125.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 39.1  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	2319	2319	2319
5°	2317	2311	2325
10°	2307	2307	2324
15°	2285	2296	2320
20°	2255	2278	2313
25°	2214	2255	2299
30°	2164	2229	2280
35°	2116	2193	2262
40°	2044	2156	2236
45°	1977	2114	2212
50°	1901	2074	2185
55°	1816	2036	2164
60°	1732	2004	2159
65°	1622	1969	2173
70°	1502	1980	2231
75°	1344	2017	2357
80°	1086	2137	2306
85°	818	1876	1828



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	163.1	3.3
10°-20°	466.1	9.5
20°-30°	700.7	14.3
30°-40°	834.6	17.0
40°-50°	854.2	17.4
50°-60°	769.0	15.7
60°-70°	604.0	12.3
70°-80°	392.0	8.0
80°-90°	121.2	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°	1330.0	27.1
0°-40°	2164.6	44.1
0°-60°	3787.9	77.2
0°-90°	4905.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4905.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1723	1723	1723	1723	1723	
5°	1715	1718	1711	1720	1722	163
15°	1641	1645	1648	1662	1666	463
25°	1491	1504	1519	1544	1549	687
35°	1288	1304	1335	1368	1377	804
45°	1039	1064	1111	1153	1162	801
55°	774	809	868	913	922	694
65°	510	548	618	670	682	507
75°	259	308	388	441	453	274
85°	53	98	122	118	118	64
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1723.2	1723.2	1723.2	1723.2	1723.2
2.5°	1724.7	1724.7	1716.9	1724.7	1726.3
5°	1715.4	1718.5	1710.7	1720.0	1721.6
7.5°	1706.0	1706.0	1701.3	1710.7	1712.3
10°	1688.9	1690.4	1688.9	1699.8	1701.3
12.5°	1667.1	1670.2	1671.7	1682.7	1684.2
15°	1640.6	1645.3	1648.4	1662.4	1665.5
17.5°	1611.0	1615.7	1623.4	1639.0	1642.1
20°	1575.1	1581.4	1590.7	1611.0	1615.7
22.5°	1536.2	1542.4	1558.0	1576.7	1584.5
25°	1491.0	1503.5	1519.1	1544.0	1548.7
27.5°	1445.8	1456.7	1477.0	1503.5	1509.7
30°	1392.9	1410.0	1434.9	1461.4	1467.6
32.5°	1341.4	1358.6	1388.2	1416.2	1424.0
35°	1288.5	1304.1	1335.2	1367.9	1377.3
37.5°	1227.7	1248.0	1282.2	1315.0	1324.3
40°	1163.8	1188.8	1227.7	1262.0	1272.9
42.5°	1103.1	1129.6	1168.5	1205.9	1218.4
45°	1039.2	1064.1	1110.9	1152.9	1162.3
47.5°	973.8	1001.8	1051.7	1093.7	1109.3
50°	908.3	937.9	990.9	1034.5	1043.9
52.5°	842.9	874.0	930.1	976.9	981.5
55°	774.3	808.6	867.8	913.0	922.3
57.5°	712.0	741.6	805.5	852.2	863.1
60°	643.5	676.2	744.7	788.4	802.4
62.5°	578.0	612.3	684.0	727.6	740.1
65°	509.5	548.4	618.5	669.9	682.4
67.5°	450.3	487.7	562.4	612.3	624.8
70°	381.7	423.8	503.2	554.7	567.1
72.5°	322.5	366.1	445.6	495.4	514.1
75°	258.6	308.5	387.9	440.9	453.4
77.5°	196.3	254.0	335.0	375.5	375.5
80°	140.2	201.0	275.8	294.5	297.6
82.5°	91.9	151.1	204.1	202.5	202.5
85°	53.0	98.2	121.5	118.4	118.4
87.5°	20.3	40.5	43.6	43.6	42.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)