

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: P311628

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-S-CA125-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: P311628  
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: 24FCZ2-55HE-UNV-L82765-S-CA125-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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**

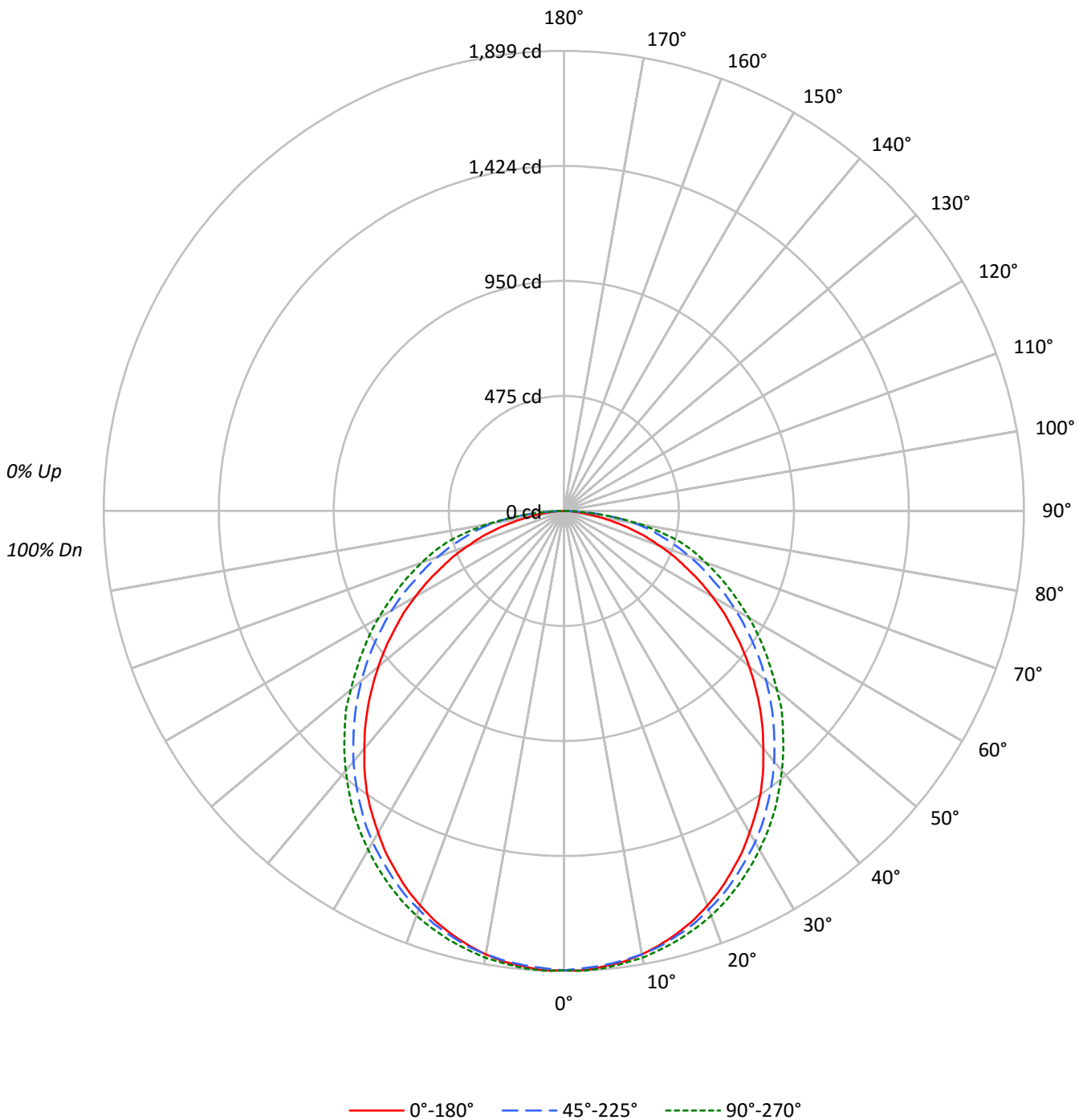
Lumens per Lamp: N/A  
Luminaire Lumens: 5397.0 lumens  
Efficiency: N/A  
Efficacy: 122.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.9  
Input Voltage (V): NR  
Input Current (A<sub>in</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



TEST NUMBER: P311628

CATALOG NUMBER: 24FCZ2-55HE-UNV-L82765-S-CA125-W2A-U-4500K

### Luminous Intensity Polar Plot





TEST NUMBER: P311628

CATALOG NUMBER: 24FCZ2-55HE-UNV-L82765-S-CA125-W2A-U-4500K

**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°	2551	2551	2551
5°	2549	2542	2558
10°	2539	2539	2558
15°	2514	2526	2553
20°	2482	2506	2545
25°	2436	2481	2530
30°	2381	2453	2509
35°	2329	2413	2489
40°	2249	2373	2460
45°	2176	2326	2434
50°	2092	2282	2404
55°	1999	2240	2381
60°	1905	2205	2376
65°	1785	2167	2391
70°	1652	2178	2455
75°	1480	2219	2594
80°	1196	2351	2537
85°	900	2064	2012



TEST NUMBER: P311628

CATALOG NUMBER: 24FCZ2-55HE-UNV-L82765-S-CA125-W2A-U-4500K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	179.5	3.3
10°-20°	512.9	9.5
20°-30°	771.0	14.3
30°-40°	918.4	17.0
40°-50°	939.9	17.4
50°-60°	846.2	15.7
60°-70°	664.5	12.3
70°-80°	431.3	8.0
80°-90°	133.4	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°	1463.4	27.1
0°-40°	2381.7	44.1
0°-60°	4167.8	77.2
0°-90°	5397.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5397.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1896	1896	1896	1896	1896	
5°	1887	1891	1882	1893	1894	179
15°	1805	1810	1814	1829	1833	509
25°	1641	1654	1671	1699	1704	756
35°	1418	1435	1469	1505	1515	884
45°	1143	1171	1222	1269	1279	882
55°	852	890	955	1005	1015	764
65°	561	603	681	737	751	558
75°	285	339	427	485	499	301
85°	58	108	134	130	130	70
90°	0	0	0	0	0	



TEST NUMBER: P311628

CATALOG NUMBER: 24FCZ2-55HE-UNV-L82765-S-CA125-W2A-U-4500K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1896.0	1896.0	1896.0	1896.0	1896.0
2.5°	1897.7	1897.7	1889.1	1897.7	1899.4
5°	1887.4	1890.9	1882.3	1892.6	1894.3
7.5°	1877.1	1877.1	1872.0	1882.3	1884.0
10°	1858.3	1860.0	1858.3	1870.3	1872.0
12.5°	1834.3	1837.7	1839.4	1851.4	1853.1
15°	1805.1	1810.3	1813.7	1829.1	1832.6
17.5°	1772.6	1777.7	1786.3	1803.4	1806.9
20°	1733.1	1740.0	1750.3	1772.6	1777.7
22.5°	1690.3	1697.1	1714.3	1734.9	1743.4
25°	1640.6	1654.3	1671.4	1698.9	1704.0
27.5°	1590.9	1602.9	1625.1	1654.3	1661.1
30°	1532.6	1551.4	1578.9	1608.0	1614.9
32.5°	1476.0	1494.9	1527.4	1558.3	1566.9
35°	1417.7	1434.9	1469.1	1505.1	1515.4
37.5°	1350.9	1373.1	1410.9	1446.9	1457.1
40°	1280.6	1308.0	1350.9	1388.6	1400.6
42.5°	1213.7	1242.9	1285.7	1326.9	1340.6
45°	1143.4	1170.9	1222.3	1268.6	1278.9
47.5°	1071.4	1102.3	1157.1	1203.4	1220.6
50°	999.4	1032.0	1090.3	1138.3	1148.6
52.5°	927.4	961.7	1023.4	1074.9	1080.0
55°	852.0	889.7	954.9	1004.6	1014.9
57.5°	783.4	816.0	886.3	937.7	949.7
60°	708.0	744.0	819.4	867.4	882.9
62.5°	636.0	673.7	752.6	800.6	814.3
65°	560.6	603.4	680.6	737.1	750.9
67.5°	495.4	536.6	618.9	673.7	687.4
70°	420.0	466.3	553.7	610.3	624.0
72.5°	354.9	402.9	490.3	545.1	565.7
75°	284.6	339.4	426.9	485.1	498.9
77.5°	216.0	279.4	368.6	413.1	413.1
80°	154.3	221.1	303.4	324.0	327.4
82.5°	101.1	166.3	224.6	222.9	222.9
85°	58.3	108.0	133.7	130.3	130.3
87.5°	22.3	44.6	48.0	48.0	46.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)