

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: P311800

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-S-CA08-W2A-U-5000K**

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: P311800  
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: 24FCZ2-75HE-UNV-L82765-S-CA08-W2A-U-5000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET  
Light Source: (336) 5000K 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**

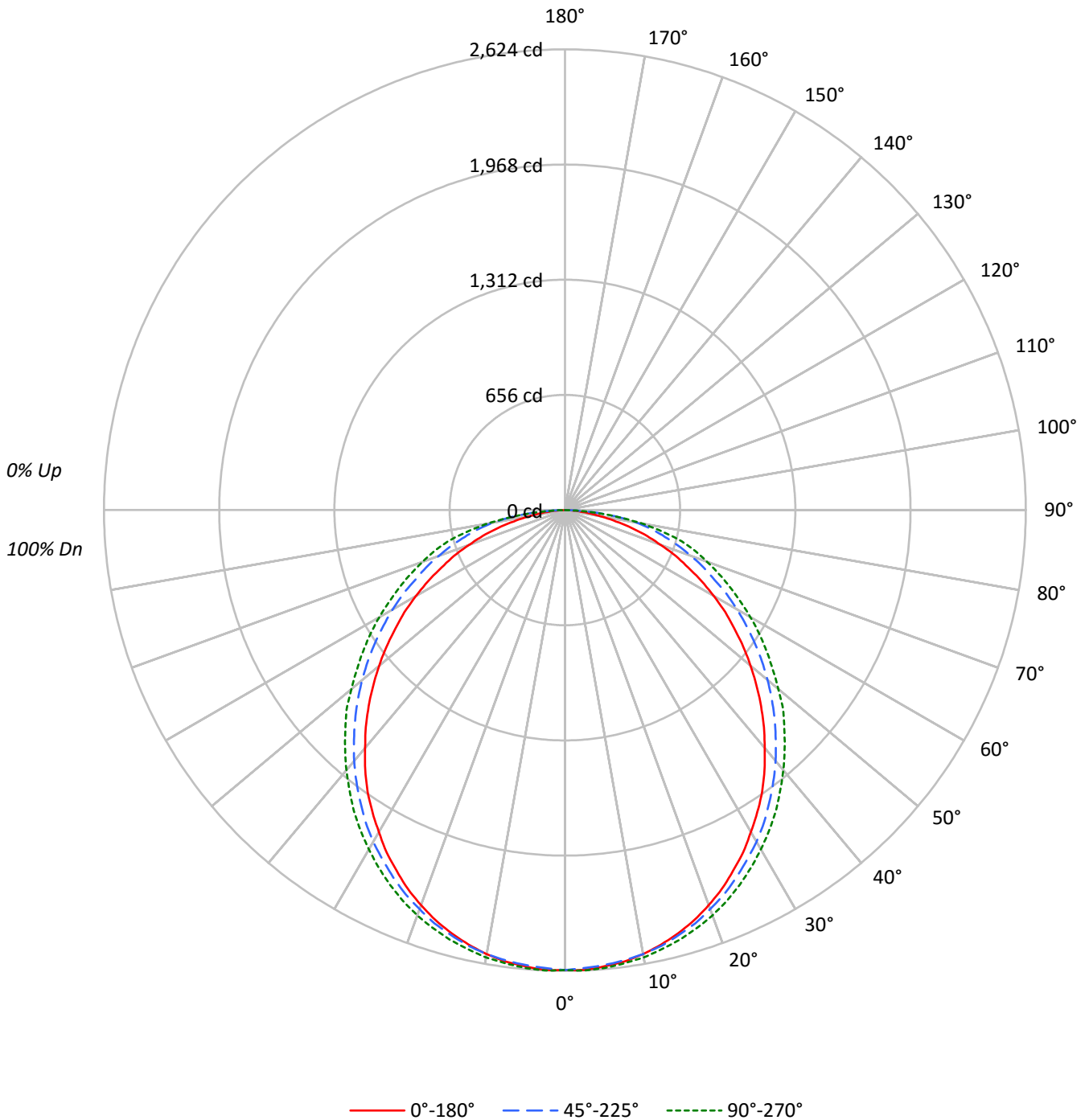
Lumens per Lamp: N/A  
Luminaire Lumens: 7457.0 lumens  
Efficiency: N/A  
Efficacy: 116.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 64.3  
Input Voltage (V): NR  
Input Current (A<sub>in</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: P311800

CATALOG NUMBER: 24FCZ2-75HE-UNV-L82765-S-CA08-W2A-U-5000K

### Luminous Intensity Polar Plot





TEST NUMBER: P311800

CATALOG NUMBER: 24FCZ2-75HE-UNV-L82765-S-CA08-W2A-U-5000K

**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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83				83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69				69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58				58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49				49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42				42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37				37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33				33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29				29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26				26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24				24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3525	3525	3525
5°	3522	3513	3535
10°	3508	3508	3534
15°	3474	3491	3527
20°	3429	3463	3517
25°	3365	3428	3495
30°	3290	3389	3466
35°	3217	3334	3439
40°	3108	3278	3399
45°	3006	3213	3362
50°	2891	3153	3322
55°	2761	3095	3289
60°	2632	3047	3282
65°	2466	2994	3303
70°	2283	3010	3392
75°	2044	3066	3583
80°	1652	3248	3505
85°	1243	2853	2779



TEST NUMBER: P311800

CATALOG NUMBER: 24FCZ2-75HE-UNV-L82765-S-CA08-W2A-U-5000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	248.0	3.3
10°-20°	708.7	9.5
20°-30°	1065.3	14.3
30°-40°	1268.9	17.0
40°-50°	1298.7	17.4
50°-60°	1169.2	15.7
60°-70°	918.2	12.3
70°-80°	595.9	8.0
80°-90°	184.3	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°	2021.9	27.1
0°-40°	3290.8	44.1
0°-60°	5758.6	77.2
0°-90°	7457.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7457.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2620	2620	2620	2620	2620	
5°	2608	2613	2601	2615	2617	248
15°	2494	2501	2506	2527	2532	703
25°	2267	2286	2309	2347	2354	1044
35°	1959	1982	2030	2080	2094	1222
45°	1580	1618	1689	1753	1767	1218
55°	1177	1229	1319	1388	1402	1055
65°	774	834	940	1018	1038	771
75°	393	469	590	670	689	416
85°	80	149	185	180	180	97
90°	0	0	0	0	0	



TEST NUMBER: P311800

CATALOG NUMBER: 24FCZ2-75HE-UNV-L82765-S-CA08-W2A-U-5000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2619.7	2619.7	2619.7	2619.7	2619.7
2.5°	2622.1	2622.1	2610.2	2622.1	2624.4
5°	2607.8	2612.6	2600.7	2615.0	2617.3
7.5°	2593.6	2593.6	2586.5	2600.7	2603.1
10°	2567.6	2570.0	2567.6	2584.2	2586.5
12.5°	2534.4	2539.2	2541.5	2558.1	2560.5
15°	2494.2	2501.3	2506.0	2527.3	2532.1
17.5°	2449.2	2456.3	2468.1	2491.8	2496.5
20°	2394.7	2404.1	2418.4	2449.2	2456.3
22.5°	2335.5	2344.9	2368.6	2397.0	2408.9
25°	2266.8	2285.7	2309.4	2347.3	2354.4
27.5°	2198.1	2214.7	2245.5	2285.7	2295.2
30°	2117.5	2143.6	2181.5	2221.8	2231.2
32.5°	2039.4	2065.4	2110.4	2153.1	2164.9
35°	1958.8	1982.5	2029.9	2079.6	2093.9
37.5°	1866.5	1897.3	1949.4	1999.1	2013.3
40°	1769.4	1807.3	1866.5	1918.6	1935.2
42.5°	1677.0	1717.2	1776.5	1833.3	1852.3
45°	1579.9	1617.8	1688.8	1752.8	1767.0
47.5°	1480.4	1523.0	1598.8	1662.8	1686.5
50°	1380.9	1425.9	1506.4	1572.8	1587.0
52.5°	1281.4	1328.8	1414.1	1485.1	1492.2
55°	1177.2	1229.3	1319.3	1388.0	1402.2
57.5°	1082.5	1127.5	1224.6	1295.6	1312.2
60°	978.2	1028.0	1132.2	1198.5	1219.8
62.5°	878.8	930.9	1039.8	1106.1	1125.1
65°	774.5	833.8	940.3	1018.5	1037.5
67.5°	684.5	741.4	855.1	930.9	949.8
70°	580.3	644.3	765.1	843.2	862.2
72.5°	490.3	556.6	677.4	753.2	781.6
75°	393.2	469.0	589.8	670.3	689.3
77.5°	298.4	386.1	509.3	570.8	570.8
80°	213.2	305.6	419.2	447.7	452.4
82.5°	139.7	229.8	310.3	307.9	307.9
85°	80.5	149.2	184.8	180.0	180.0
87.5°	30.8	61.6	66.3	66.3	64.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)