

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: P311729

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-S-CP125-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: P311729  
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: 24FCZ2-65HE-UNV-L82765-S-CP125-W2A-U-5500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET  
Light Source: (336) 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**

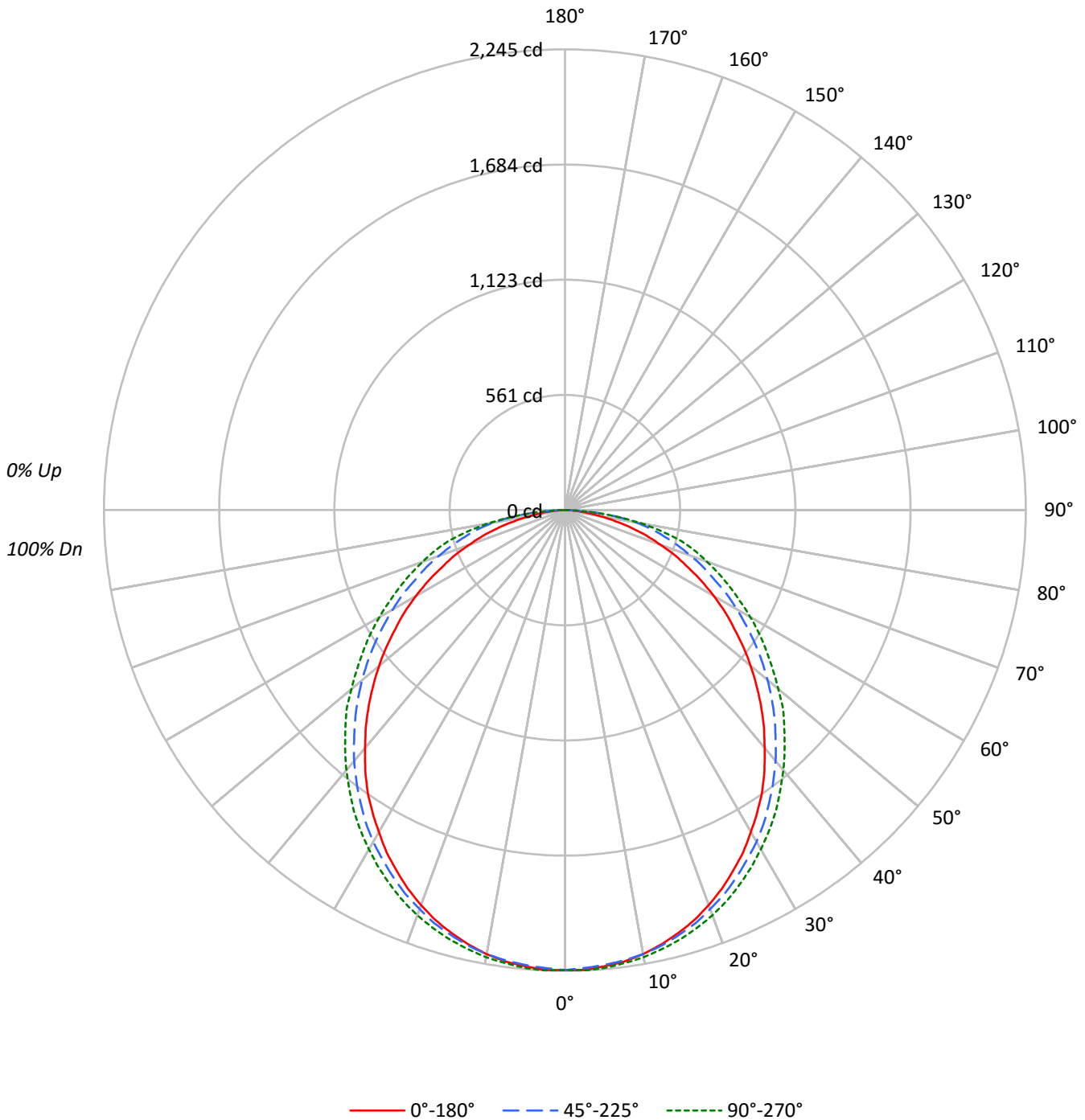
Lumens per Lamp: N/A  
Luminaire Lumens: 6379.0 lumens  
Efficiency: N/A  
Efficacy: 117.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 54.1  
Input Voltage (V): NR  
Input Current (A<sub>in</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



TEST NUMBER: P311729

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-S-CP125-W2A-U-5500K

### Luminous Intensity Polar Plot





TEST NUMBER: P311729

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-S-CP125-W2A-U-5500K

**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°	3015	3015	3015
5°	3013	3005	3024
10°	3001	3001	3023
15°	2972	2986	3017
20°	2933	2962	3009
25°	2879	2933	2990
30°	2814	2899	2965
35°	2752	2852	2942
40°	2659	2804	2908
45°	2572	2749	2876
50°	2473	2698	2842
55°	2362	2647	2814
60°	2252	2606	2808
65°	2110	2561	2826
70°	1953	2575	2901
75°	1749	2623	3065
80°	1413	2779	2999
85°	1064	2439	2377



TEST NUMBER: P311729

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-S-CP125-W2A-U-5500K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	212.2	3.3
10°-20°	606.2	9.5
20°-30°	911.3	14.3
30°-40°	1085.5	17.0
40°-50°	1110.9	17.4
50°-60°	1000.1	15.7
60°-70°	785.4	12.3
70°-80°	509.8	8.0
80°-90°	157.6	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°	1729.6	27.1
0°-40°	2815.1	44.1
0°-60°	4926.2	77.2
0°-90°	6379.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6379.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2241	2241	2241	2241	2241	
5°	2231	2235	2225	2237	2239	212
15°	2134	2140	2144	2162	2166	602
25°	1939	1955	1976	2008	2014	893
35°	1676	1696	1736	1779	1791	1045
45°	1352	1384	1445	1499	1512	1042
55°	1007	1052	1129	1187	1200	903
65°	663	713	804	871	888	660
75°	336	401	504	573	590	356
85°	69	128	158	154	154	83
90°	0	0	0	0	0	



TEST NUMBER: P311729

CATALOG NUMBER: 24FC22-65HE-UNV-L82765-S-CP125-W2A-U-5500K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2241.0	2241.0	2241.0	2241.0	2241.0
2.5°	2243.0	2243.0	2232.9	2243.0	2245.0
5°	2230.9	2234.9	2224.8	2236.9	2239.0
7.5°	2218.7	2218.7	2212.6	2224.8	2226.8
10°	2196.4	2198.4	2196.4	2210.6	2212.6
12.5°	2168.0	2172.1	2174.1	2188.3	2190.3
15°	2133.6	2139.7	2143.7	2162.0	2166.0
17.5°	2095.1	2101.2	2111.3	2131.6	2135.6
20°	2048.5	2056.6	2068.8	2095.1	2101.2
22.5°	1997.8	2005.9	2026.2	2050.5	2060.7
25°	1939.1	1955.3	1975.6	2008.0	2014.0
27.5°	1880.3	1894.5	1920.8	1955.3	1963.4
30°	1811.4	1833.7	1866.1	1900.6	1908.7
32.5°	1744.6	1766.9	1805.3	1841.8	1852.0
35°	1675.7	1695.9	1736.5	1779.0	1791.2
37.5°	1596.7	1623.0	1667.6	1710.1	1722.3
40°	1513.6	1546.0	1596.7	1641.2	1655.4
42.5°	1434.6	1469.0	1519.7	1568.3	1584.5
45°	1351.5	1383.9	1444.7	1499.4	1511.6
47.5°	1266.4	1302.9	1367.7	1422.4	1442.7
50°	1181.3	1219.8	1288.7	1345.4	1357.6
52.5°	1096.2	1136.7	1209.6	1270.4	1276.5
55°	1007.0	1051.6	1128.6	1187.4	1199.5
57.5°	926.0	964.5	1047.5	1108.3	1122.5
60°	836.8	879.4	968.5	1025.3	1043.5
62.5°	751.7	796.3	889.5	946.2	962.4
65°	662.6	713.2	804.4	871.3	887.5
67.5°	585.6	634.2	731.5	796.3	812.5
70°	496.4	551.1	654.5	721.3	737.5
72.5°	419.4	476.2	579.5	644.3	668.6
75°	336.4	401.2	504.5	573.4	589.6
77.5°	255.3	330.3	435.6	488.3	488.3
80°	182.4	261.4	358.6	383.0	387.0
82.5°	119.5	196.5	265.4	263.4	263.4
85°	68.9	127.7	158.0	154.0	154.0
87.5°	26.3	52.7	56.7	56.7	54.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)