

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: P314477

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-S-CP125-W2A-U-4000K**

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: P314477  
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-L83050-S-CP125-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET  
Light Source: (336) 4000K 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**

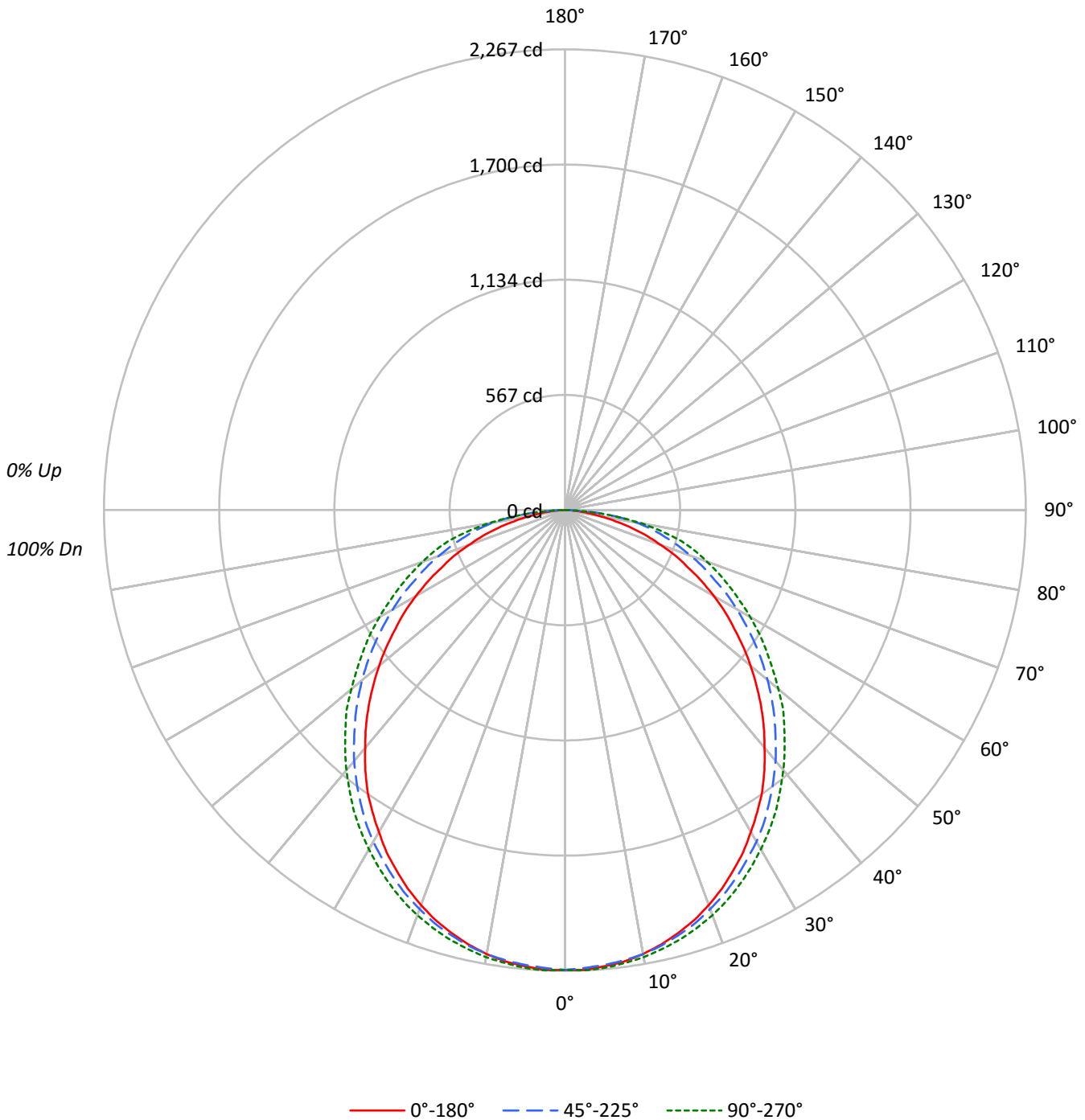
Lumens per Lamp: N/A  
Luminaire Lumens: 6441.0 lumens  
Efficiency: N/A  
Efficacy: 119.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 53.8  
Input Voltage (V): NR  
Input Current (A<sub>in</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: P314477

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-S-CP125-W2A-U-4000K

### Luminous Intensity Polar Plot





TEST NUMBER: P314477

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-S-CP125-W2A-U-4000K

**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°	3045	3045	3045
5°	3042	3034	3053
10°	3030	3030	3052
15°	3001	3015	3047
20°	2962	2991	3038
25°	2907	2961	3019
30°	2842	2928	2994
35°	2779	2880	2971
40°	2684	2832	2936
45°	2597	2776	2904
50°	2497	2724	2869
55°	2385	2673	2841
60°	2274	2632	2835
65°	2130	2586	2853
70°	1972	2600	2930
75°	1765	2648	3095
80°	1426	2806	3028
85°	1074	2464	2401



TEST NUMBER: P314477

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-S-CP125-W2A-U-4000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	214.2	3.3
10°-20°	612.1	9.5
20°-30°	920.1	14.3
30°-40°	1096.0	17.0
40°-50°	1121.7	17.4
50°-60°	1009.9	15.7
60°-70°	793.1	12.3
70°-80°	514.7	8.0
80°-90°	159.2	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°	1746.4	27.1
0°-40°	2842.4	44.1
0°-60°	4974.0	77.2
0°-90°	6441.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6441.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2263	2263	2263	2263	2263	
5°	2252	2257	2246	2259	2261	214
15°	2154	2160	2165	2183	2187	607
25°	1958	1974	1995	2028	2034	902
35°	1692	1712	1753	1796	1809	1056
45°	1365	1397	1459	1514	1526	1052
55°	1017	1062	1140	1199	1211	912
65°	669	720	812	880	896	666
75°	340	405	509	579	595	359
85°	70	129	160	156	156	84
90°	0	0	0	0	0	



TEST NUMBER: P314477

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-S-CP125-W2A-U-4000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2262.8	2262.8	2262.8	2262.8	2262.8
2.5°	2264.8	2264.8	2254.6	2264.8	2266.9
5°	2252.5	2256.6	2246.4	2258.7	2260.7
7.5°	2240.3	2240.3	2234.1	2246.4	2248.4
10°	2217.8	2219.8	2217.8	2232.1	2234.1
12.5°	2189.1	2193.2	2195.3	2209.6	2211.6
15°	2154.3	2160.5	2164.6	2183.0	2187.1
17.5°	2115.5	2121.6	2131.8	2152.3	2156.4
20°	2068.4	2076.6	2088.9	2115.5	2121.6
22.5°	2017.3	2025.4	2045.9	2070.5	2080.7
25°	1957.9	1974.3	1994.8	2027.5	2033.6
27.5°	1898.6	1912.9	1939.5	1974.3	1982.5
30°	1829.0	1851.5	1884.3	1919.1	1927.2
32.5°	1761.5	1784.0	1822.9	1859.7	1870.0
35°	1692.0	1712.4	1753.3	1796.3	1808.6
37.5°	1612.2	1638.8	1683.8	1726.7	1739.0
40°	1528.3	1561.0	1612.2	1657.2	1671.5
42.5°	1448.5	1483.3	1534.4	1583.5	1599.9
45°	1364.6	1397.3	1458.7	1514.0	1526.2
47.5°	1278.7	1315.5	1381.0	1436.2	1456.7
50°	1192.8	1231.6	1301.2	1358.5	1370.8
52.5°	1106.8	1147.7	1221.4	1282.8	1288.9
55°	1016.8	1061.8	1139.6	1198.9	1211.2
57.5°	935.0	973.8	1057.7	1119.1	1133.4
60°	845.0	887.9	977.9	1035.2	1053.6
62.5°	759.0	804.0	898.2	955.4	971.8
65°	669.0	720.2	812.2	879.7	896.1
67.5°	591.3	640.4	738.6	804.0	820.4
70°	501.2	556.5	660.8	728.3	744.7
72.5°	423.5	480.8	585.1	650.6	675.1
75°	339.6	405.1	509.4	579.0	595.4
77.5°	257.8	333.5	439.9	493.1	493.1
80°	184.1	263.9	362.1	386.7	390.8
82.5°	120.7	198.5	268.0	266.0	266.0
85°	69.6	128.9	159.6	155.5	155.5
87.5°	26.6	53.2	57.3	57.3	55.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)