

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: P311726

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-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: P311726  
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-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**

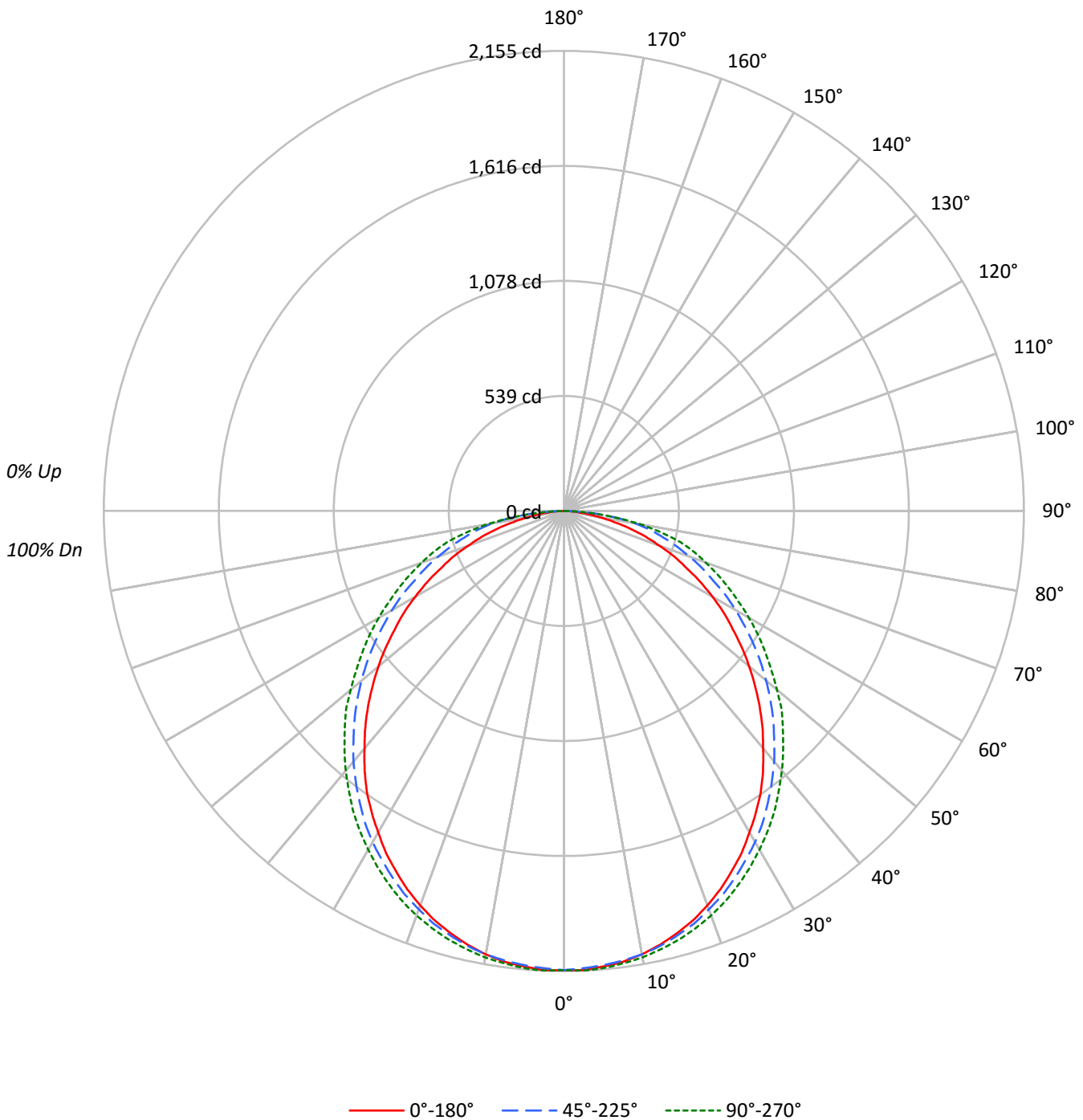
Lumens per Lamp: N/A  
Luminaire Lumens: 6123.0 lumens  
Efficiency: N/A  
Efficacy: 115.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 53.2  
Input Voltage (V): NR  
Input Current (A<sub>in</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: P311726

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-S-CP125-W2A-U-4000K

### Luminous Intensity Polar Plot





TEST NUMBER: P311726

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-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°	2894	2894	2894
5°	2892	2884	2903
10°	2880	2880	2902
15°	2853	2866	2896
20°	2815	2843	2888
25°	2763	2815	2870
30°	2701	2783	2846
35°	2642	2738	2824
40°	2552	2692	2791
45°	2468	2639	2761
50°	2373	2589	2728
55°	2267	2541	2701
60°	2161	2502	2695
65°	2025	2458	2712
70°	1875	2471	2785
75°	1679	2518	2942
80°	1356	2667	2879
85°	1020	2342	2282



TEST NUMBER: P311726

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-S-CP125-W2A-U-4000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	203.6	3.3
10°-20°	581.9	9.5
20°-30°	874.7	14.3
30°-40°	1041.9	17.0
40°-50°	1066.3	17.4
50°-60°	960.0	15.7
60°-70°	753.9	12.3
70°-80°	489.3	8.0
80°-90°	151.3	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°	1660.2	27.1
0°-40°	2702.1	44.1
0°-60°	4728.5	77.2
0°-90°	6123.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6123.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2151	2151	2151	2151	2151	
5°	2141	2145	2136	2147	2149	203
15°	2048	2054	2058	2075	2079	577
25°	1861	1877	1896	1927	1933	857
35°	1608	1628	1667	1708	1719	1003
45°	1297	1328	1387	1439	1451	1000
55°	967	1009	1083	1140	1151	867
65°	636	685	772	836	852	633
75°	323	385	484	550	566	342
85°	66	122	152	148	148	80
90°	0	0	0	0	0	



TEST NUMBER: P311726

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-S-CP125-W2A-U-4000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2151.0	2151.0	2151.0	2151.0	2151.0
2.5°	2153.0	2153.0	2143.3	2153.0	2154.9
5°	2141.3	2145.2	2135.5	2147.2	2149.1
7.5°	2129.7	2129.7	2123.8	2135.5	2137.4
10°	2108.3	2110.2	2108.3	2121.9	2123.8
12.5°	2081.0	2084.9	2086.9	2100.5	2102.4
15°	2048.0	2053.8	2057.7	2075.2	2079.1
17.5°	2011.0	2016.9	2026.6	2046.0	2049.9
20°	1966.3	1974.1	1985.7	2011.0	2016.9
22.5°	1917.7	1925.4	1944.9	1968.2	1978.0
25°	1861.3	1876.8	1896.3	1927.4	1933.2
27.5°	1804.9	1818.5	1843.8	1876.8	1884.6
30°	1738.7	1760.1	1791.2	1824.3	1832.1
32.5°	1674.6	1695.9	1732.9	1767.9	1777.6
35°	1608.4	1627.9	1666.8	1707.6	1719.3
37.5°	1532.6	1557.9	1600.6	1641.5	1653.2
40°	1452.8	1484.0	1532.6	1575.4	1589.0
42.5°	1377.0	1410.0	1458.7	1505.3	1520.9
45°	1297.2	1328.4	1386.7	1439.2	1450.9
47.5°	1215.6	1250.6	1312.8	1365.3	1384.8
50°	1133.9	1170.8	1237.0	1291.4	1303.1
52.5°	1052.2	1091.1	1161.1	1219.4	1225.3
55°	966.6	1009.4	1083.3	1139.7	1151.4
57.5°	888.8	925.8	1005.5	1063.9	1077.5
60°	803.2	844.1	929.7	984.1	1001.6
62.5°	721.6	764.3	853.8	908.3	923.8
65°	636.0	684.6	772.1	836.3	851.9
67.5°	562.1	608.8	702.1	764.3	779.9
70°	476.5	529.0	628.2	692.4	707.9
72.5°	402.6	457.0	556.2	618.5	641.8
75°	322.9	385.1	484.3	550.4	566.0
77.5°	245.1	317.0	418.2	468.7	468.7
80°	175.0	250.9	344.2	367.6	371.5
82.5°	114.7	188.7	254.8	252.8	252.8
85°	66.1	122.5	151.7	147.8	147.8
87.5°	25.3	50.6	54.5	54.5	52.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)