

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: P311725

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-S-CP125-W2A-U-3500K**

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: P311725
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-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (336) 3500K 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

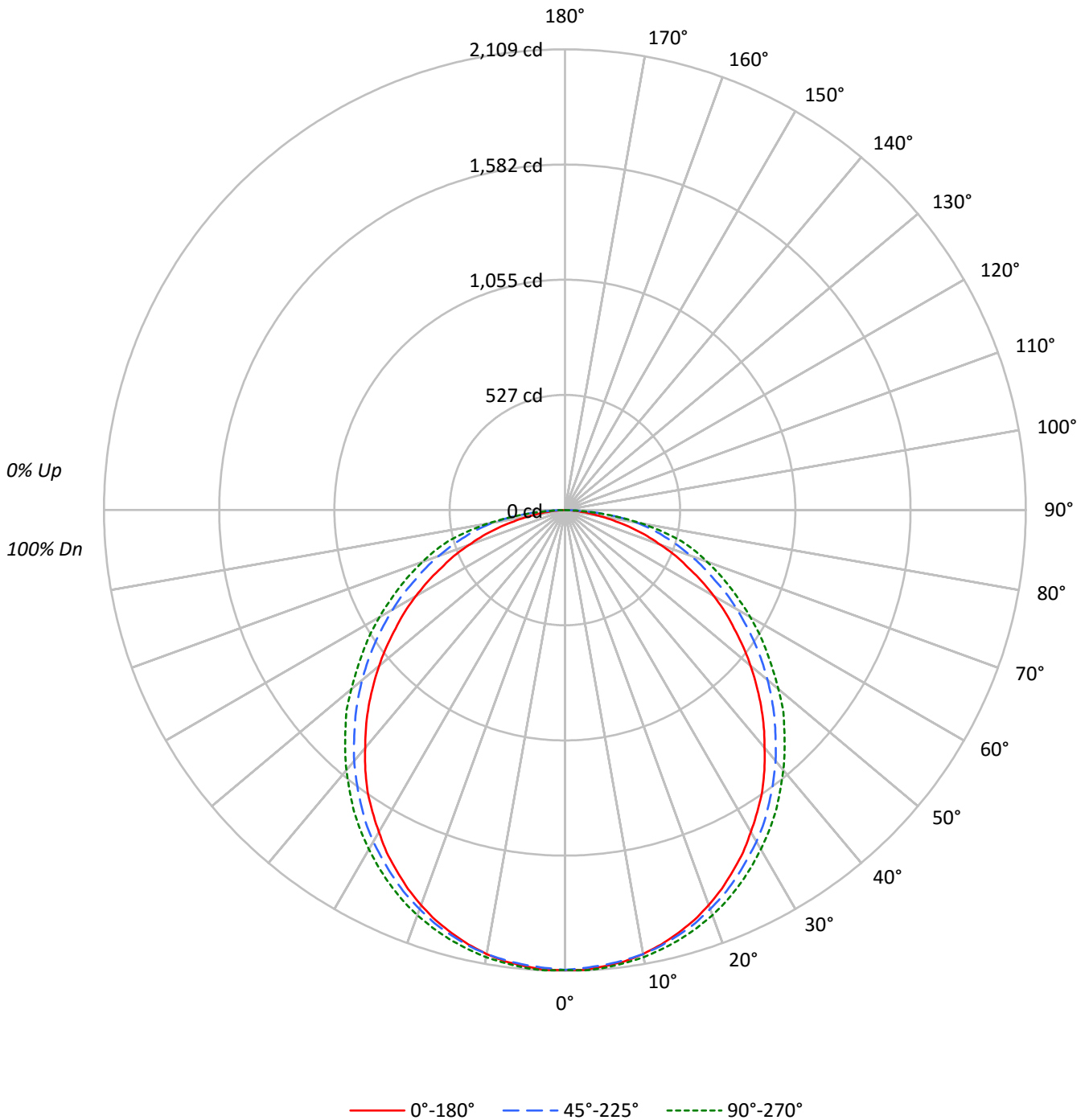
Lumens per Lamp: N/A
Luminaire Lumens: 5992.0 lumens
Efficiency: N/A
Efficacy: 113.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 52.8
Input Voltage (V): NR
Input Current (A_{in}): 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: P311725
CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-S-CP125-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P311725

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-S-CP125-W2A-U-3500K

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°	2832	2832	2832
5°	2830	2823	2841
10°	2819	2819	2840
15°	2792	2805	2834
20°	2755	2782	2826
25°	2704	2755	2809
30°	2644	2723	2786
35°	2585	2679	2764
40°	2497	2634	2731
45°	2416	2582	2702
50°	2323	2534	2669
55°	2219	2487	2643
60°	2115	2448	2638
65°	1982	2406	2654
70°	1834	2419	2725
75°	1642	2464	2879
80°	1327	2610	2817
85°	999	2293	2232



TEST NUMBER: P311725

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-S-CP125-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	199.3	3.3
10°-20°	569.4	9.5
20°-30°	856.0	14.3
30°-40°	1019.6	17.0
40°-50°	1043.5	17.4
50°-60°	939.5	15.7
60°-70°	737.8	12.3
70°-80°	478.8	8.0
80°-90°	148.1	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°	1624.7	27.1
0°-40°	2644.3	44.1
0°-60°	4627.3	77.2
0°-90°	5992.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5992.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2105	2105	2105	2105	2105	
5°	2096	2099	2090	2101	2103	199
15°	2004	2010	2014	2031	2035	565
25°	1821	1837	1856	1886	1892	839
35°	1574	1593	1631	1671	1682	982
45°	1270	1300	1357	1408	1420	979
55°	946	988	1060	1115	1127	848
65°	622	670	756	818	834	620
75°	316	377	474	539	554	334
85°	65	120	148	145	145	78
90°	0	0	0	0	0	



TEST NUMBER: P311725

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-S-CP125-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2105.0	2105.0	2105.0	2105.0	2105.0
2.5°	2106.9	2106.9	2097.4	2106.9	2108.8
5°	2095.5	2099.3	2089.8	2101.2	2103.1
7.5°	2084.1	2084.1	2078.4	2089.8	2091.7
10°	2063.2	2065.1	2063.2	2076.5	2078.4
12.5°	2036.5	2040.3	2042.2	2055.5	2057.4
15°	2004.2	2009.9	2013.7	2030.8	2034.6
17.5°	1968.0	1973.7	1983.2	2002.3	2006.1
20°	1924.2	1931.8	1943.2	1968.0	1973.7
22.5°	1876.6	1884.2	1903.3	1926.1	1935.6
25°	1821.4	1836.7	1855.7	1886.2	1891.9
27.5°	1766.2	1779.6	1804.3	1836.7	1844.3
30°	1701.5	1722.5	1752.9	1785.3	1792.9
32.5°	1638.7	1659.7	1695.8	1730.1	1739.6
35°	1574.0	1593.0	1631.1	1671.1	1682.5
37.5°	1499.8	1524.5	1566.4	1606.4	1617.8
40°	1421.8	1452.2	1499.8	1541.7	1555.0
42.5°	1347.5	1379.9	1427.5	1473.1	1488.4
45°	1269.5	1299.9	1357.0	1408.4	1419.8
47.5°	1189.6	1223.8	1284.7	1336.1	1355.1
50°	1109.6	1145.8	1210.5	1263.8	1275.2
52.5°	1029.7	1067.7	1136.3	1193.4	1199.1
55°	945.9	987.8	1060.1	1115.3	1126.7
57.5°	869.8	906.0	984.0	1041.1	1054.4
60°	786.1	826.0	909.8	963.1	980.2
62.5°	706.1	748.0	835.5	888.8	904.1
65°	622.4	670.0	755.6	818.4	833.6
67.5°	550.0	595.7	687.1	748.0	763.2
70°	466.3	517.7	614.8	677.6	692.8
72.5°	394.0	447.3	544.3	605.2	628.1
75°	315.9	376.8	473.9	538.6	553.9
77.5°	239.8	310.2	409.2	458.7	458.7
80°	171.3	245.5	336.9	359.7	363.5
82.5°	112.3	184.6	249.3	247.4	247.4
85°	64.7	119.9	148.5	144.6	144.6
87.5°	24.7	49.5	53.3	53.3	51.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)