

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: P311714

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-S-CA125-W2A-U-2700K**

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: P311714
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-CA125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 2700K 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: 5741.0 lumens
Efficiency: N/A
Efficacy: 109.1 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

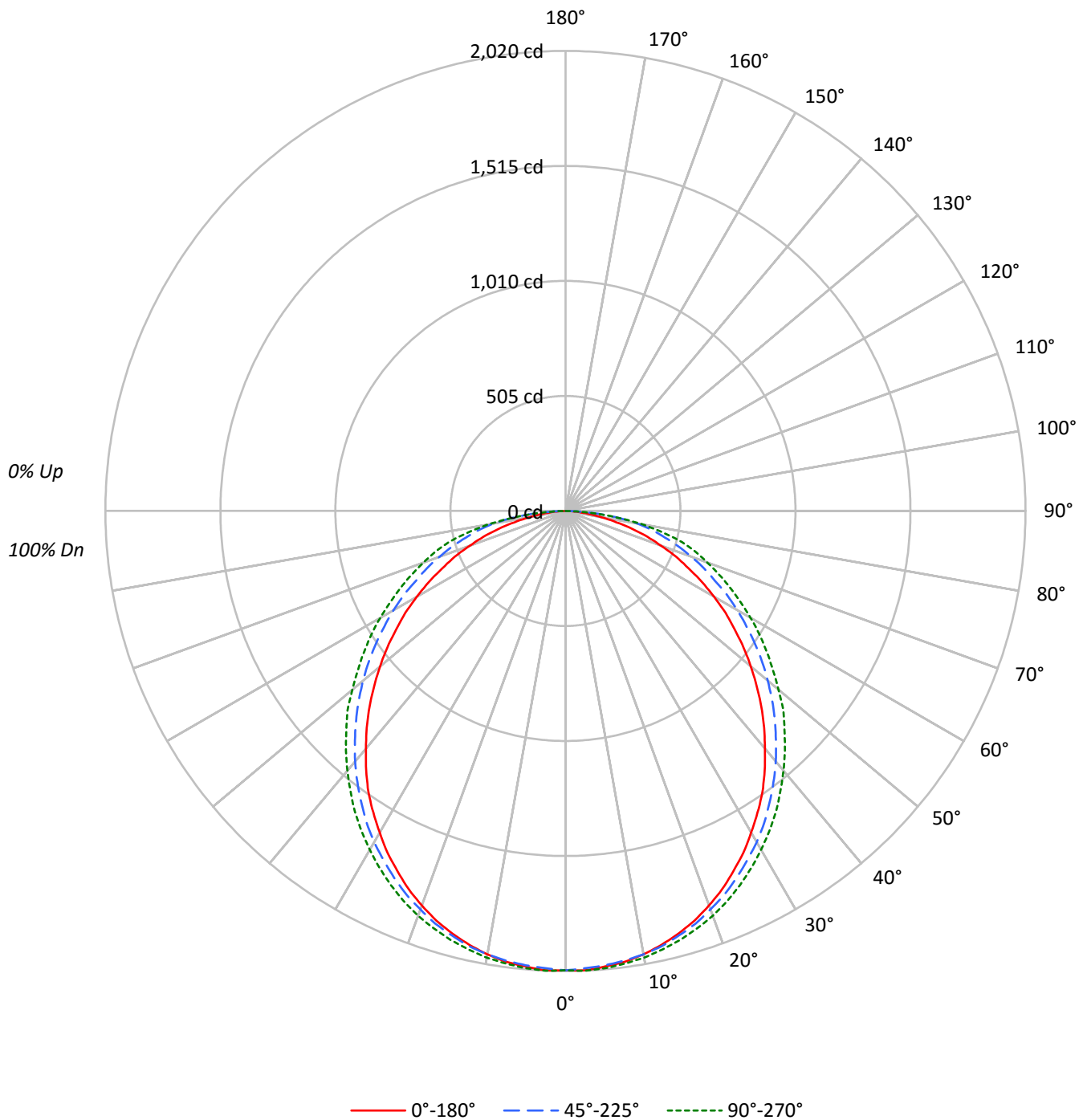
Input Watts (W): 52.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P311714

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-S-CA125-W2A-U-2700K

Luminous Intensity Polar Plot





TEST NUMBER: P311714

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-S-CA125-W2A-U-2700K

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	2714	2714	2714
5°	2712	2704	2722
10°	2701	2701	2721
15°	2675	2687	2715
20°	2640	2666	2708
25°	2591	2640	2691
30°	2533	2609	2669
35°	2477	2567	2648
40°	2393	2524	2617
45°	2314	2474	2589
50°	2225	2428	2557
55°	2126	2383	2532
60°	2027	2346	2527
65°	1898	2305	2543
70°	1758	2317	2611
75°	1574	2361	2759
80°	1272	2501	2699
85°	957	2195	2140



TEST NUMBER: P311714

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-S-CA125-W2A-U-2700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	190.9	3.3
10°-20°	545.6	9.5
20°-30°	820.1	14.3
30°-40°	976.9	17.0
40°-50°	999.8	17.4
50°-60°	900.1	15.7
60°-70°	706.9	12.3
70°-80°	458.8	8.0
80°-90°	141.9	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°	1556.6	27.1
0°-40°	2533.5	44.1
0°-60°	4433.4	77.2
0°-90°	5741.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5741.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2017	2017	2017	2017	2017	
5°	2008	2011	2002	2013	2015	191
15°	1920	1926	1929	1946	1949	541
25°	1745	1760	1778	1807	1813	804
35°	1508	1526	1563	1601	1612	941
45°	1216	1246	1300	1349	1360	938
55°	906	946	1016	1069	1080	812
65°	596	642	724	784	799	594
75°	303	361	454	516	531	320
85°	62	115	142	139	139	75
90°	0	0	0	0	0	



TEST NUMBER: P311714

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-S-CA125-W2A-U-2700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2016.9	2016.9	2016.9	2016.9	2016.9
2.5°	2018.7	2018.7	2009.6	2018.7	2020.5
5°	2007.7	2011.4	2002.3	2013.2	2015.0
7.5°	1996.8	1996.8	1991.3	2002.3	2004.1
10°	1976.7	1978.6	1976.7	1989.5	1991.3
12.5°	1951.2	1954.8	1956.7	1969.4	1971.3
15°	1920.2	1925.7	1929.3	1945.7	1949.4
17.5°	1885.6	1891.0	1900.1	1918.4	1922.0
20°	1843.6	1850.9	1861.8	1885.6	1891.0
22.5°	1798.0	1805.3	1823.6	1845.4	1854.6
25°	1745.1	1759.7	1778.0	1807.1	1812.6
27.5°	1692.3	1705.0	1728.7	1759.7	1767.0
30°	1630.3	1650.3	1679.5	1710.5	1717.8
32.5°	1570.1	1590.1	1624.8	1657.6	1666.7
35°	1508.1	1526.3	1562.8	1601.1	1612.0
37.5°	1437.0	1460.7	1500.8	1539.1	1550.0
40°	1362.2	1391.4	1437.0	1477.1	1489.8
42.5°	1291.1	1322.1	1367.7	1411.4	1426.0
45°	1216.3	1245.5	1300.2	1349.4	1360.4
47.5°	1139.7	1172.5	1230.9	1280.1	1298.4
50°	1063.1	1097.8	1159.8	1210.8	1221.8
52.5°	986.5	1023.0	1088.7	1143.4	1148.8
55°	906.3	946.4	1015.7	1068.6	1079.5
57.5°	833.4	868.0	942.8	997.5	1010.2
60°	753.1	791.4	871.7	922.7	939.1
62.5°	676.5	716.7	800.5	851.6	866.2
65°	596.3	641.9	724.0	784.1	798.7
67.5°	527.0	570.8	658.3	716.7	731.2
70°	446.8	496.0	589.0	649.2	663.8
72.5°	377.5	428.5	521.5	579.9	601.8
75°	302.7	361.1	454.1	516.1	530.7
77.5°	229.8	297.2	392.1	439.5	439.5
80°	164.1	235.2	322.8	344.7	348.3
82.5°	107.6	176.9	238.9	237.1	237.1
85°	62.0	114.9	142.2	138.6	138.6
87.5°	23.7	47.4	51.1	51.1	49.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)