

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: P311043

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-CA125-W2A-U-4500K**

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: P311043
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 4500K 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: 6049.0 lumens
Efficiency: N/A
Efficacy: 112.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

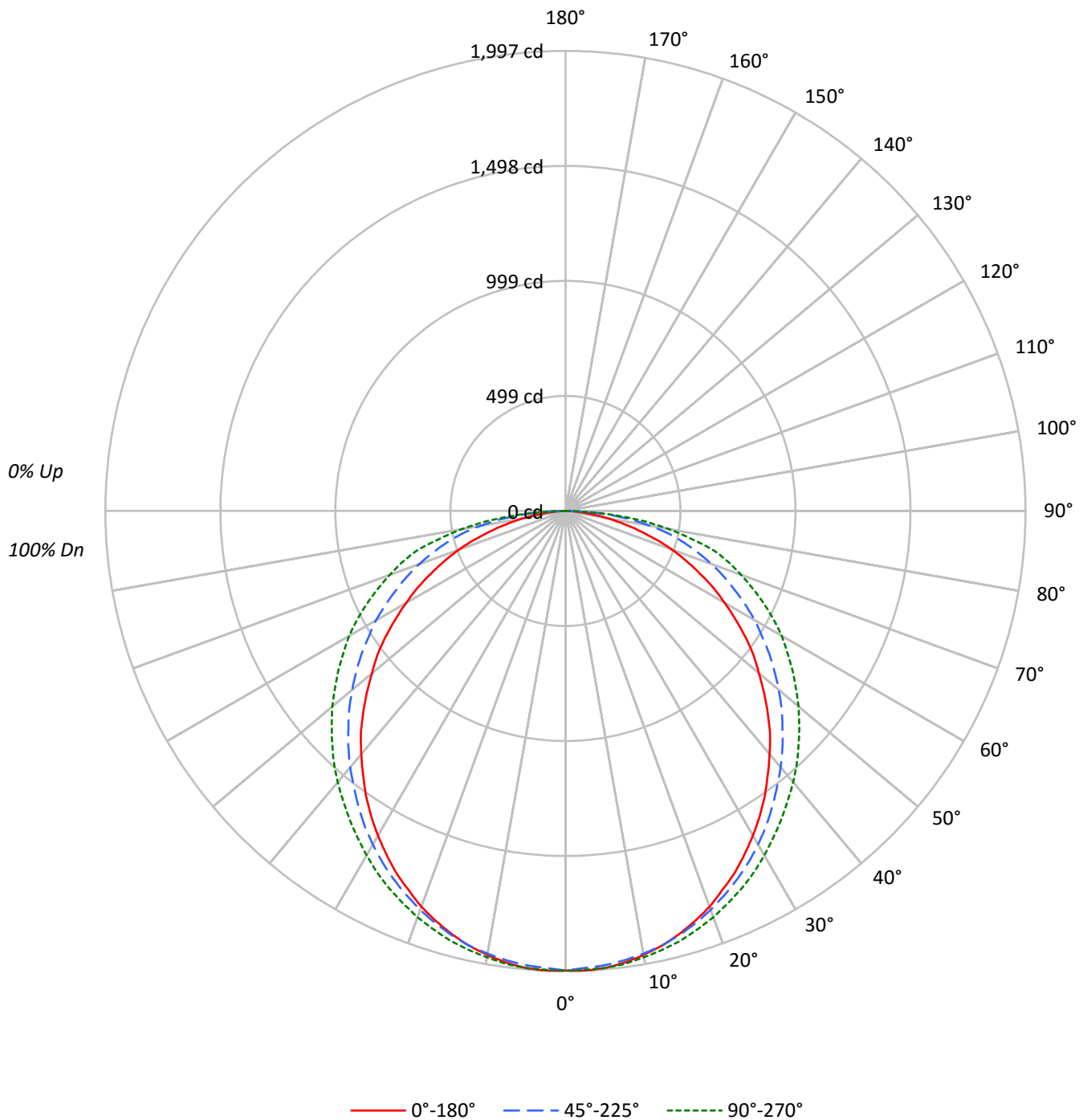
Input Watts (W): 53.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P311043

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-CA125-W2A-U-4500K

Luminous Intensity Polar Plot





TEST NUMBER: P311043

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-CA125-W2A-U-4500K

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		0
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2684	2684	2684
5°	2689	2673	2689
10°	2673	2665	2687
15°	2650	2656	2689
20°	2618	2638	2687
25°	2577	2619	2685
30°	2529	2597	2682
35°	2479	2571	2683
40°	2422	2552	2700
45°	2364	2536	2723
50°	2294	2529	2764
55°	2236	2533	2820
60°	2150	2555	2916
65°	2051	2581	3022
70°	1942	2661	3190
75°	1732	2775	3485
80°	1478	2939	3561
85°	1053	2913	3409



TEST NUMBER: P311043

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-CA125-W2A-U-4500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	188.8	3.1
10°-20°	539.8	8.9
20°-30°	815.4	13.5
30°-40°	982.7	16.2
40°-50°	1031.7	17.1
50°-60°	965.2	16.0
60°-70°	797.1	13.2
70°-80°	543.1	9.0
80°-90°	185.2	3.1
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°	1544.0	25.5
0°-40°	2526.7	41.8
0°-60°	4523.6	74.8
0°-90°	6049.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6049.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1995	1995	1995	1995	1995	
5°	1991	1989	1979	1991	1991	189
15°	1903	1905	1907	1927	1931	536
25°	1736	1744	1764	1798	1808	799
35°	1509	1525	1565	1618	1634	943
45°	1242	1268	1333	1405	1431	958
55°	953	991	1080	1168	1202	851
65°	644	698	811	913	949	639
75°	333	409	534	634	670	355
85°	68	134	189	213	221	85
90°	0	0	0	0	0	



TEST NUMBER: P311043

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-CA125-W2A-U-4500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1994.9	1994.9	1994.9	1994.9	1994.9
2.5°	1996.9	1994.9	1984.9	1994.9	1992.9
5°	1990.9	1988.9	1978.9	1990.9	1990.9
7.5°	1976.8	1976.8	1966.8	1980.9	1982.9
10°	1956.8	1956.8	1950.8	1966.8	1966.8
12.5°	1932.7	1932.7	1932.7	1948.7	1950.8
15°	1902.6	1904.6	1906.6	1926.7	1930.7
17.5°	1866.5	1870.5	1876.5	1900.6	1904.6
20°	1828.3	1832.3	1842.4	1870.5	1876.5
22.5°	1780.2	1790.2	1804.2	1836.4	1842.4
25°	1736.0	1744.0	1764.1	1798.2	1808.3
27.5°	1681.8	1693.9	1720.0	1756.1	1770.1
30°	1627.6	1639.7	1671.8	1713.9	1726.0
32.5°	1569.4	1587.5	1621.6	1665.8	1679.8
35°	1509.2	1525.3	1565.4	1617.6	1633.7
37.5°	1443.0	1465.1	1509.2	1565.4	1585.5
40°	1378.8	1402.9	1453.0	1513.2	1537.3
42.5°	1314.6	1338.6	1394.8	1463.1	1487.1
45°	1242.3	1268.4	1332.6	1404.9	1431.0
47.5°	1170.1	1202.2	1272.4	1348.7	1376.8
50°	1095.8	1131.9	1208.2	1288.5	1320.6
52.5°	1029.6	1063.7	1144.0	1230.3	1260.4
55°	953.3	991.4	1079.7	1168.0	1202.2
57.5°	875.0	917.2	1011.5	1107.8	1142.0
60°	798.8	844.9	949.3	1045.6	1083.8
62.5°	724.5	770.7	879.0	979.4	1017.5
65°	644.2	698.4	810.8	913.2	949.3
67.5°	568.0	626.2	744.6	844.9	881.1
70°	493.7	549.9	676.3	774.7	810.8
72.5°	413.4	477.7	604.1	706.4	744.6
75°	333.2	409.4	533.8	634.2	670.3
77.5°	258.9	337.2	461.6	543.9	561.9
80°	190.7	270.9	379.3	437.5	459.6
82.5°	122.4	202.7	289.0	331.1	349.2
85°	68.2	134.5	188.7	212.7	220.8
87.5°	28.1	58.2	76.3	86.3	86.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)