

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: P314098

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-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: P314098
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-L83050-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: 6312.0 lumens
Efficiency: N/A
Efficacy: 114.3 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

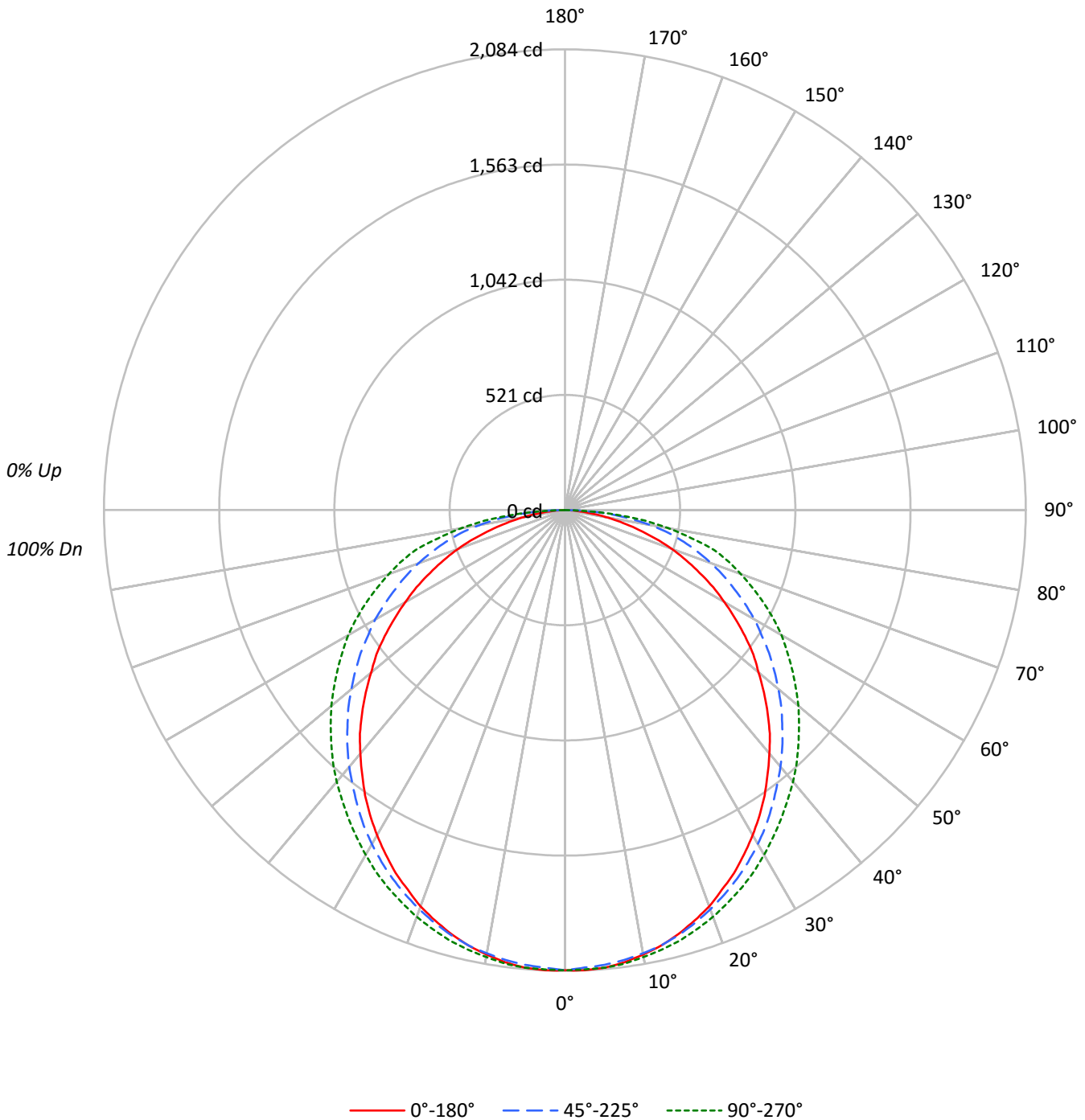
Input Watts (W): 55.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P314098

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-CA125-W2A-U-4500K

Luminous Intensity Polar Plot





TEST NUMBER: P314098

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-CA125-W2A-U-4500K

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	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2801	2801	2801
5°	2806	2789	2806
10°	2790	2781	2804
15°	2765	2771	2806
20°	2732	2753	2804
25°	2689	2733	2801
30°	2639	2710	2798
35°	2587	2683	2800
40°	2527	2663	2818
45°	2467	2646	2841
50°	2393	2639	2884
55°	2333	2643	2943
60°	2243	2666	3043
65°	2140	2694	3154
70°	2027	2776	3329
75°	1807	2896	3636
80°	1541	3067	3716
85°	1099	3040	3557



TEST NUMBER: P314098

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-CA125-W2A-U-4500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	197.0	3.1
10°-20°	563.3	8.9
20°-30°	850.8	13.5
30°-40°	1025.4	16.2
40°-50°	1076.5	17.1
50°-60°	1007.1	16.0
60°-70°	831.7	13.2
70°-80°	566.8	9.0
80°-90°	193.3	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°	1611.1	25.5
0°-40°	2636.6	41.8
0°-60°	4720.2	74.8
0°-90°	6312.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6312.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2082	2082	2082	2082	2082	
5°	2078	2075	2065	2078	2078	197
15°	1985	1987	1990	2010	2015	560
25°	1812	1820	1841	1876	1887	833
35°	1575	1592	1634	1688	1705	984
45°	1296	1324	1391	1466	1493	1000
55°	995	1034	1127	1219	1254	888
65°	672	729	846	953	991	667
75°	348	427	557	662	700	371
85°	71	140	197	222	230	89
90°	0	0	0	0	0	



TEST NUMBER: P314098

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-CA125-W2A-U-4500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2081.6	2081.6	2081.6	2081.6	2081.6
2.5°	2083.7	2081.6	2071.2	2081.6	2079.5
5°	2077.5	2075.4	2064.9	2077.5	2077.5
7.5°	2062.8	2062.8	2052.3	2067.0	2069.1
10°	2041.9	2041.9	2035.6	2052.3	2052.3
12.5°	2016.7	2016.7	2016.7	2033.5	2035.6
15°	1985.3	1987.4	1989.5	2010.4	2014.6
17.5°	1947.6	1951.8	1958.1	1983.2	1987.4
20°	1907.8	1912.0	1922.5	1951.8	1958.1
22.5°	1857.6	1868.0	1882.7	1916.2	1922.5
25°	1811.5	1819.9	1840.8	1876.4	1886.9
27.5°	1754.9	1767.5	1794.7	1832.4	1847.1
30°	1698.4	1711.0	1744.5	1788.5	1801.0
32.5°	1637.7	1656.5	1692.1	1738.2	1752.9
35°	1574.8	1591.6	1633.5	1687.9	1704.7
37.5°	1505.7	1528.8	1574.8	1633.5	1654.4
40°	1438.7	1463.9	1516.2	1579.0	1604.2
42.5°	1371.7	1396.8	1455.5	1526.7	1551.8
45°	1296.3	1323.5	1390.6	1465.9	1493.2
47.5°	1220.9	1254.4	1327.7	1407.3	1436.6
50°	1143.4	1181.1	1260.7	1344.5	1378.0
52.5°	1074.3	1109.9	1193.7	1283.7	1315.2
55°	994.7	1034.5	1126.7	1218.8	1254.4
57.5°	913.1	957.1	1055.5	1156.0	1191.6
60°	833.5	881.7	990.6	1091.1	1130.9
62.5°	756.0	804.2	917.3	1022.0	1061.8
65°	672.2	728.8	846.1	952.9	990.6
67.5°	592.7	653.4	777.0	881.7	919.4
70°	515.2	573.8	705.7	808.4	846.1
72.5°	431.4	498.4	630.4	737.2	777.0
75°	347.6	427.2	557.1	661.8	699.5
77.5°	270.2	351.8	481.7	567.5	586.4
80°	198.9	282.7	395.8	456.5	479.6
82.5°	127.7	211.5	301.6	345.5	364.4
85°	71.2	140.3	196.9	222.0	230.4
87.5°	29.3	60.7	79.6	90.1	90.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)