

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: P314096

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-CA125-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: P314096
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-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC 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: 5954.0 lumens
Efficiency: N/A
Efficacy: 113.2 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

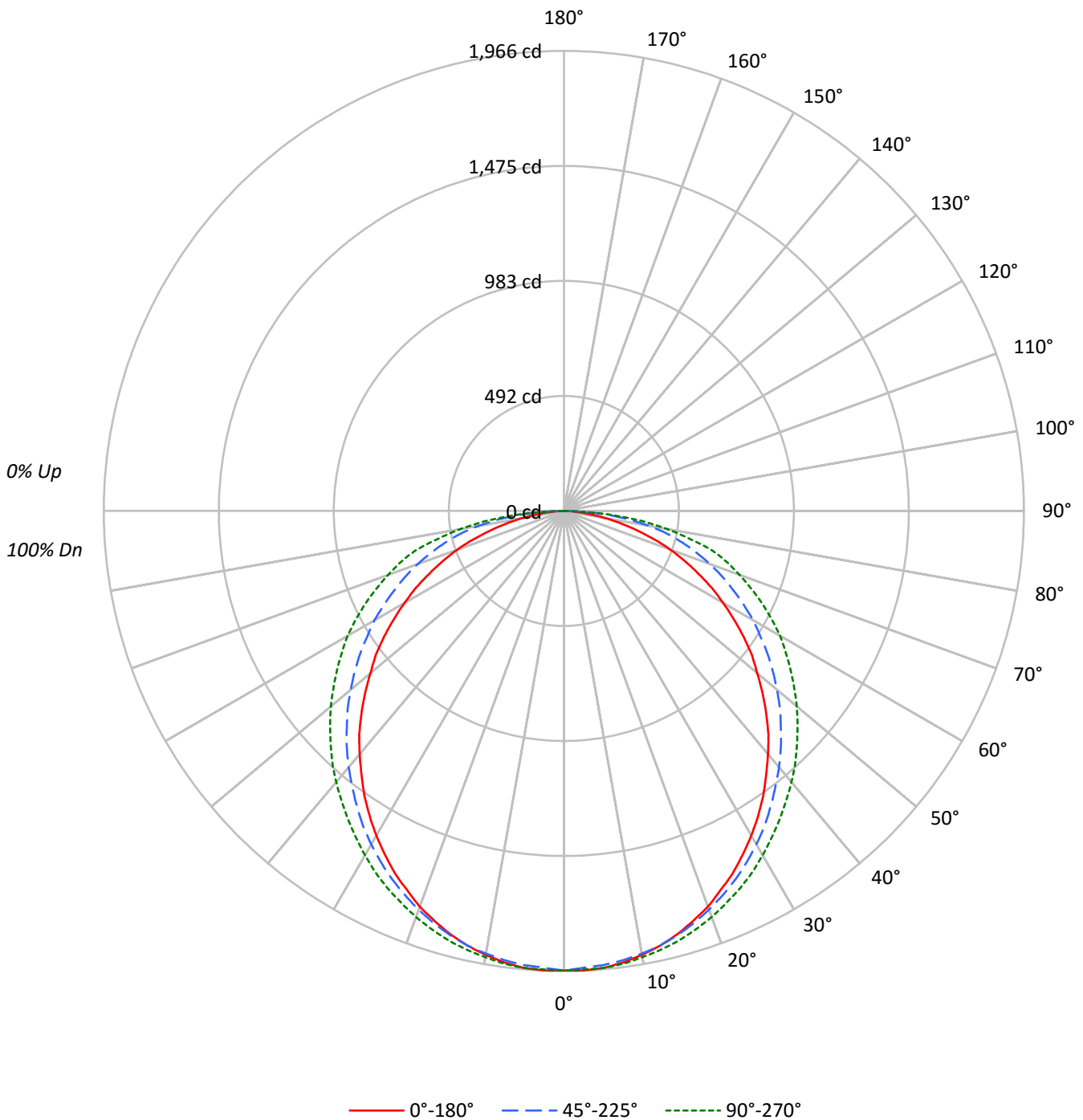
Input Watts (W): 52.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P314096

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-CA125-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P314096

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-CA125-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	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°	2642	2642	2642
5°	2647	2631	2647
10°	2631	2623	2645
15°	2609	2614	2647
20°	2577	2596	2645
25°	2537	2578	2642
30°	2489	2557	2639
35°	2440	2531	2641
40°	2384	2512	2658
45°	2327	2496	2680
50°	2258	2489	2721
55°	2201	2493	2776
60°	2116	2514	2870
65°	2019	2541	2975
70°	1912	2619	3140
75°	1705	2732	3430
80°	1454	2893	3505
85°	1037	2867	3355



TEST NUMBER: P314096

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-CA125-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	185.8	3.1
10°-20°	531.4	8.9
20°-30°	802.6	13.5
30°-40°	967.3	16.2
40°-50°	1015.5	17.1
50°-60°	950.0	16.0
60°-70°	784.5	13.2
70°-80°	534.6	9.0
80°-90°	182.3	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°	1519.7	25.5
0°-40°	2487.0	41.8
0°-60°	4452.5	74.8
0°-90°	5954.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5954.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1964	1964	1964	1964	1964	
5°	1960	1958	1948	1960	1960	186
15°	1873	1875	1877	1896	1900	528
25°	1709	1717	1736	1770	1780	786
35°	1486	1501	1541	1592	1608	928
45°	1223	1248	1312	1383	1408	943
55°	938	976	1063	1150	1183	838
65°	634	687	798	899	934	629
75°	328	403	526	624	660	350
85°	67	132	186	209	217	84
90°	0	0	0	0	0	



TEST NUMBER: P314096

CATALOG NUMBER: 24FCZ2-65HE-UNV-L83050-CA125-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1963.6	1963.6	1963.6	1963.6	1963.6
2.5°	1965.6	1963.6	1953.7	1963.6	1961.6
5°	1959.6	1957.7	1947.8	1959.6	1959.6
7.5°	1945.8	1945.8	1935.9	1949.7	1951.7
10°	1926.0	1926.0	1920.1	1935.9	1935.9
12.5°	1902.3	1902.3	1902.3	1918.1	1920.1
15°	1872.7	1874.7	1876.7	1896.4	1900.4
17.5°	1837.1	1841.1	1847.0	1870.7	1874.7
20°	1799.6	1803.6	1813.4	1841.1	1847.0
22.5°	1752.2	1762.1	1775.9	1807.5	1813.4
25°	1708.7	1716.6	1736.4	1770.0	1779.9
27.5°	1655.4	1667.3	1692.9	1728.5	1742.3
30°	1602.1	1613.9	1645.5	1687.0	1698.9
32.5°	1544.8	1562.6	1596.1	1639.6	1653.4
35°	1485.5	1501.3	1540.8	1592.2	1608.0
37.5°	1420.3	1442.1	1485.5	1540.8	1560.6
40°	1357.1	1380.8	1430.2	1489.5	1513.2
42.5°	1293.9	1317.6	1372.9	1440.1	1463.8
45°	1222.8	1248.5	1311.7	1382.8	1408.5
47.5°	1151.7	1183.3	1252.4	1327.5	1355.1
50°	1078.6	1114.1	1189.2	1268.2	1299.8
52.5°	1013.4	1047.0	1126.0	1210.9	1240.6
55°	938.3	975.9	1062.8	1149.7	1183.3
57.5°	861.3	902.8	995.6	1090.4	1124.0
60°	786.2	831.7	934.4	1029.2	1066.7
62.5°	713.1	758.6	865.2	964.0	1001.5
65°	634.1	687.4	798.1	898.8	934.4
67.5°	559.0	616.3	732.9	831.7	867.2
70°	486.0	541.3	665.7	762.5	798.1
72.5°	406.9	470.2	594.6	695.4	732.9
75°	327.9	403.0	525.5	624.2	659.8
77.5°	254.8	331.9	454.3	535.3	553.1
80°	187.7	266.7	373.4	430.6	452.4
82.5°	120.5	199.5	284.5	325.9	343.7
85°	67.2	132.4	185.7	209.4	217.3
87.5°	27.7	57.3	75.1	84.9	84.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)