

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: P311046

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-CA125-W2A-U-5700K**

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: P311046
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-5700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 5700K 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: 6208.0 lumens
Efficiency: N/A
Efficacy: 114.8 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

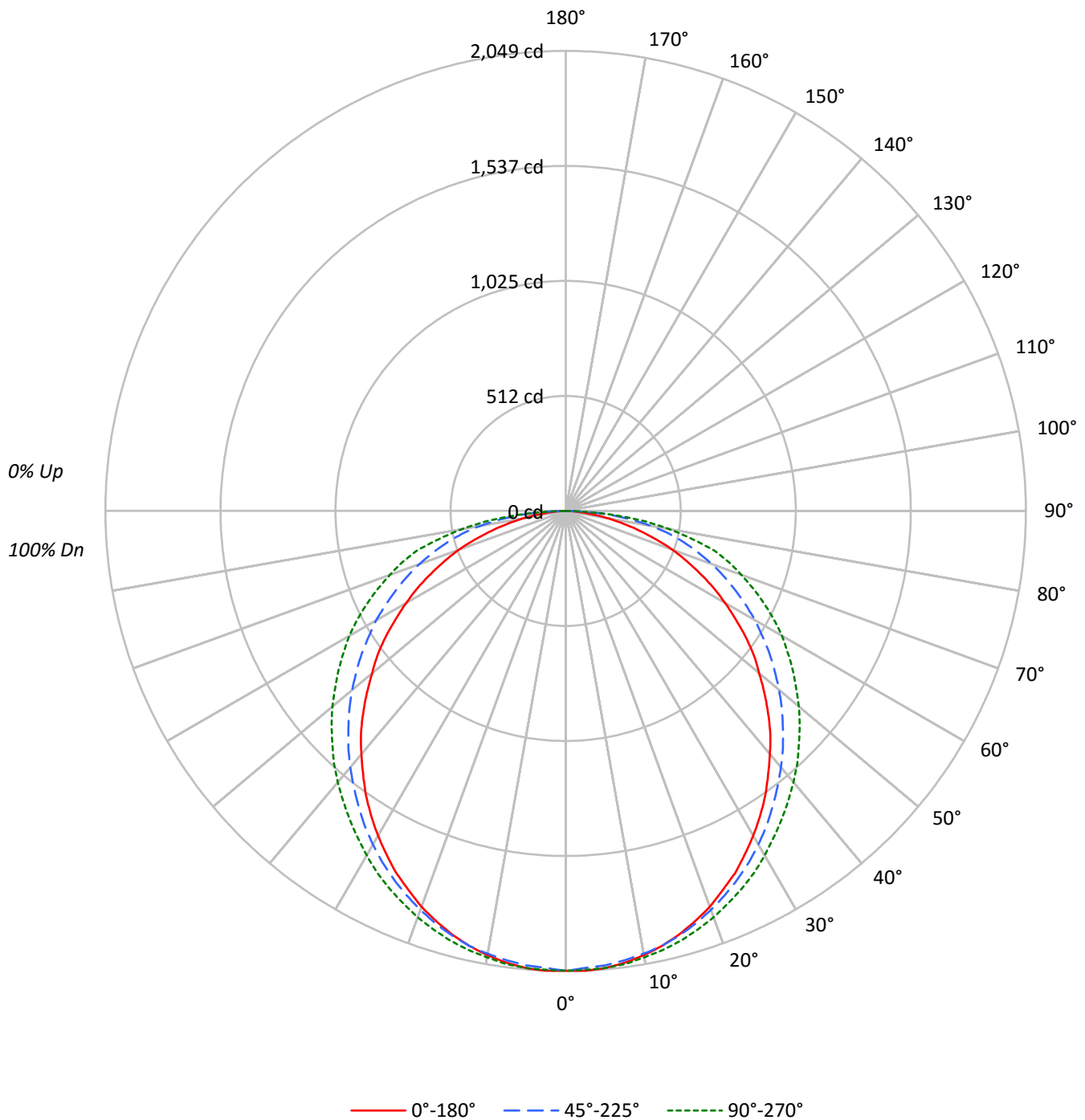
Input Watts (W): 54.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P311046

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-CA125-W2A-U-5700K

Luminous Intensity Polar Plot





TEST NUMBER: P311046

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-CA125-W2A-U-5700K

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°	2755	2755	2755
5°	2760	2743	2760
10°	2744	2735	2758
15°	2720	2726	2760
20°	2687	2707	2757
25°	2645	2688	2755
30°	2595	2666	2752
35°	2544	2639	2754
40°	2485	2619	2771
45°	2426	2602	2794
50°	2354	2595	2837
55°	2295	2599	2894
60°	2206	2622	2993
65°	2105	2649	3102
70°	1993	2731	3273
75°	1777	2848	3576
80°	1516	3016	3655
85°	1081	2989	3498



TEST NUMBER: P311046

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-CA125-W2A-U-5700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.8	3.1
10°-20°	554.0	8.9
20°-30°	836.8	13.5
30°-40°	1008.5	16.2
40°-50°	1058.8	17.1
50°-60°	990.5	16.0
60°-70°	818.0	13.2
70°-80°	557.4	9.0
80°-90°	190.1	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°	1584.6	25.5
0°-40°	2593.1	41.8
0°-60°	4642.5	74.8
0°-90°	6208.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6208.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2047	2047	2047	2047	2047	
5°	2043	2041	2031	2043	2043	194
15°	1953	1955	1957	1977	1981	550
25°	1782	1790	1810	1846	1856	820
35°	1549	1565	1607	1660	1677	968
45°	1275	1302	1368	1442	1469	983
55°	978	1018	1108	1199	1234	873
65°	661	717	832	937	974	656
75°	342	420	548	651	688	365
85°	70	138	194	218	227	88
90°	0	0	0	0	0	



TEST NUMBER: P311046

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-CA125-W2A-U-5700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2047.3	2047.3	2047.3	2047.3	2047.3
2.5°	2049.4	2047.3	2037.0	2047.3	2045.3
5°	2043.2	2041.2	2030.9	2043.2	2043.2
7.5°	2028.8	2028.8	2018.5	2032.9	2035.0
10°	2008.2	2008.2	2002.0	2018.5	2018.5
12.5°	1983.5	1983.5	1983.5	2000.0	2002.0
15°	1952.6	1954.7	1956.7	1977.3	1981.4
17.5°	1915.5	1919.6	1925.8	1950.5	1954.7
20°	1876.4	1880.5	1890.8	1919.6	1925.8
22.5°	1827.0	1837.3	1851.7	1884.6	1890.8
25°	1781.6	1789.9	1810.5	1845.5	1855.8
27.5°	1726.0	1738.4	1765.2	1802.2	1816.7
30°	1670.4	1682.8	1715.7	1759.0	1771.3
32.5°	1610.7	1629.2	1664.2	1709.6	1724.0
35°	1548.9	1565.4	1606.6	1660.1	1676.6
37.5°	1480.9	1503.6	1548.9	1606.6	1627.2
40°	1415.0	1439.7	1491.2	1553.0	1577.7
42.5°	1349.1	1373.8	1431.5	1501.5	1526.2
45°	1275.0	1301.7	1367.6	1441.8	1468.6
47.5°	1200.8	1233.8	1305.9	1384.1	1413.0
50°	1124.6	1161.7	1239.9	1322.3	1355.3
52.5°	1056.6	1091.6	1174.0	1262.6	1293.5
55°	978.4	1017.5	1108.1	1198.7	1233.8
57.5°	898.0	941.3	1038.1	1137.0	1172.0
60°	819.8	867.1	974.2	1073.1	1112.2
62.5°	743.6	790.9	902.1	1005.1	1044.3
65°	661.2	716.8	832.1	937.2	974.2
67.5°	582.9	642.6	764.1	867.1	904.2
70°	506.7	564.4	694.1	795.0	832.1
72.5°	424.3	490.2	620.0	725.0	764.1
75°	341.9	420.2	547.9	650.9	687.9
77.5°	265.7	346.0	473.7	558.2	576.7
80°	195.7	278.1	389.3	449.0	471.7
82.5°	125.6	208.0	296.6	339.9	358.4
85°	70.0	138.0	193.6	218.3	226.6
87.5°	28.8	59.7	78.3	88.6	88.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)