

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: P310371

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-RDP-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: P310371
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
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-RDP-CA125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 4175.0 lumens
Efficiency: N/A
Efficacy: 77.2 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

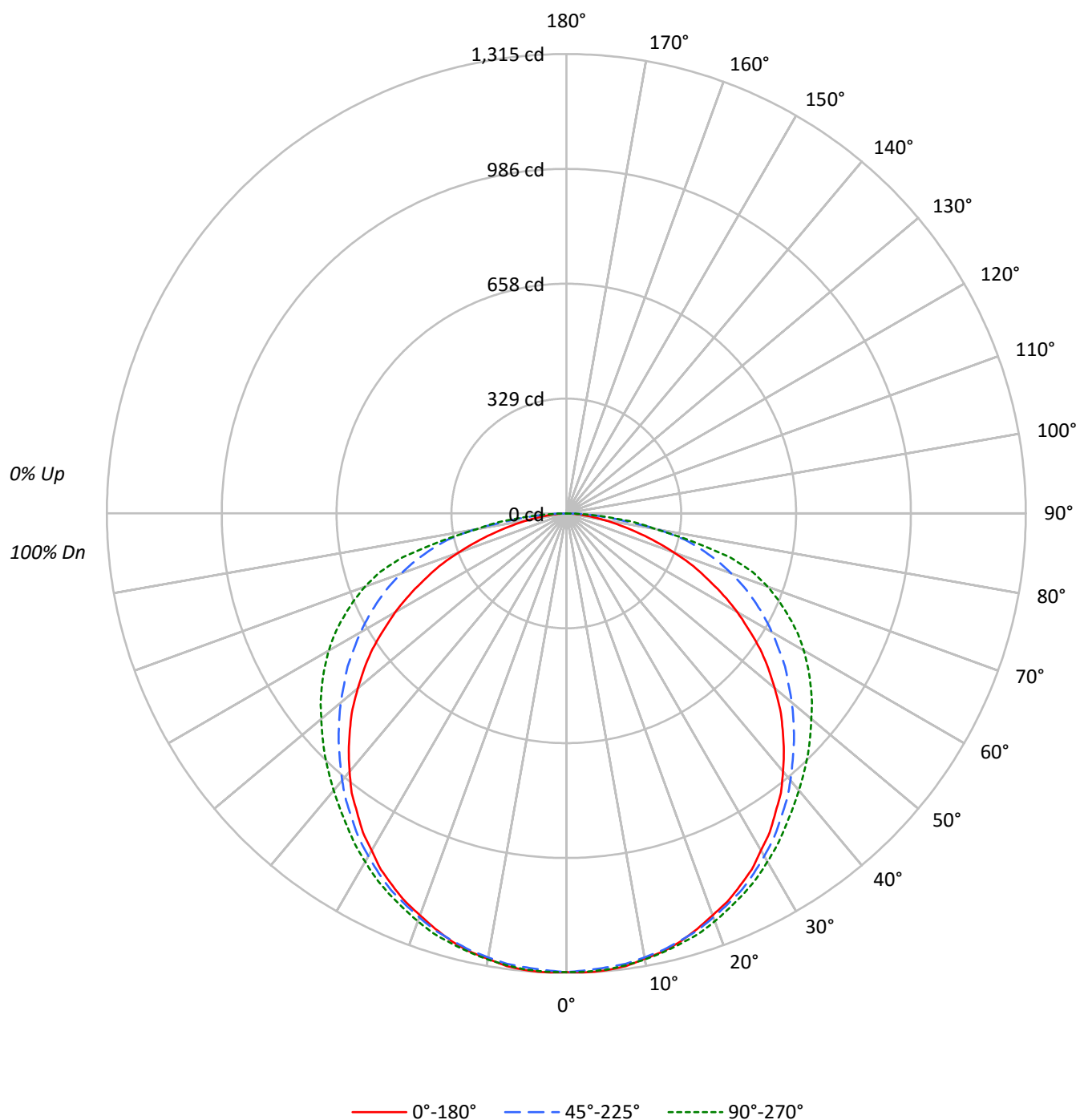
Input Watts (W): 54.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310371

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

Luminous Intensity Polar Plot





TEST NUMBER: P310371

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-RDP-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	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	68	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1766	1766	1766
5°	1773	1762	1770
10°	1768	1763	1771
15°	1765	1763	1774
20°	1752	1761	1779
25°	1746	1765	1783
30°	1731	1760	1789
35°	1714	1755	1796
40°	1695	1753	1819
45°	1667	1753	1860
50°	1630	1764	1916
55°	1589	1792	2001
60°	1521	1828	2112
65°	1424	1892	2242
70°	1295	1980	2412
75°	1098	2088	2519
80°	866	2102	2038
85°	639	1598	1791



TEST NUMBER: P310371

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.5	3.0
10°-20°	358.4	8.6
20°-30°	548.1	13.1
30°-40°	670.1	16.0
40°-50°	714.2	17.1
50°-60°	682.8	16.4
60°-70°	578.4	13.9
70°-80°	388.7	9.3
80°-90°	109.7	2.6
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°	1031.1	24.7
0°-40°	1701.2	40.7
0°-60°	3098.1	74.2
0°-90°	4175.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4175.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1313	1313	1313	1313	1313	
5°	1313	1311	1305	1311	1311	125
15°	1267	1267	1265	1276	1274	357
25°	1176	1180	1189	1199	1201	542
35°	1044	1052	1069	1089	1093	654
45°	876	890	922	961	977	676
55°	677	702	764	824	853	603
65°	447	493	594	673	704	444
75°	211	288	402	470	485	226
85°	41	85	104	112	116	51
90°	0	0	0	0	0	



TEST NUMBER: P310371

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

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1312.9	1312.9	1312.9	1312.9	1312.9
2.5°	1315.0	1315.0	1308.8	1312.9	1312.9
5°	1312.9	1310.8	1304.6	1310.8	1310.8
7.5°	1306.7	1304.6	1300.5	1306.7	1304.6
10°	1294.3	1294.3	1290.1	1296.4	1296.4
12.5°	1283.9	1281.9	1279.8	1288.1	1286.0
15°	1267.4	1267.4	1265.3	1275.6	1273.6
17.5°	1246.7	1248.7	1250.8	1259.1	1261.1
20°	1223.9	1228.0	1230.1	1242.5	1242.5
22.5°	1203.2	1205.2	1209.4	1221.8	1221.8
25°	1176.2	1180.4	1188.7	1199.0	1201.1
27.5°	1149.3	1151.4	1161.7	1176.2	1178.3
30°	1114.1	1120.3	1132.8	1149.3	1151.4
32.5°	1083.1	1089.3	1103.8	1120.3	1124.5
35°	1043.7	1052.0	1068.6	1089.3	1093.4
37.5°	1008.5	1014.7	1035.4	1058.2	1064.4
40°	965.0	977.4	998.1	1025.1	1035.4
42.5°	921.5	934.0	958.8	994.0	1006.4
45°	876.0	890.5	921.5	960.9	977.4
47.5°	830.4	847.0	882.2	927.7	946.4
50°	778.6	799.3	842.8	894.6	915.3
52.5°	728.9	753.8	801.4	859.4	886.3
55°	677.2	702.0	764.1	824.2	853.2
57.5°	619.2	652.3	720.7	789.0	820.1
60°	565.3	596.4	679.2	753.8	784.9
62.5°	507.4	548.8	637.8	716.5	747.6
65°	447.3	492.9	594.3	673.0	704.1
67.5°	393.5	443.2	550.8	629.5	660.6
70°	329.3	391.4	503.2	581.9	613.0
72.5°	269.2	337.5	453.5	530.1	559.1
75°	211.2	287.8	401.7	470.1	484.6
77.5°	157.4	238.1	347.9	376.9	366.5
80°	111.8	190.5	271.3	256.8	263.0
82.5°	72.5	145.0	167.7	190.5	196.7
85°	41.4	84.9	103.5	111.8	116.0
87.5°	18.6	31.1	41.4	41.4	39.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)