

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: P311133

Luminaire Tested: **24FCZ2-75HE-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: P311133
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: 24FCZ2-75HE-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: 6976.0 lumens
Efficiency: N/A
Efficacy: 109.0 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

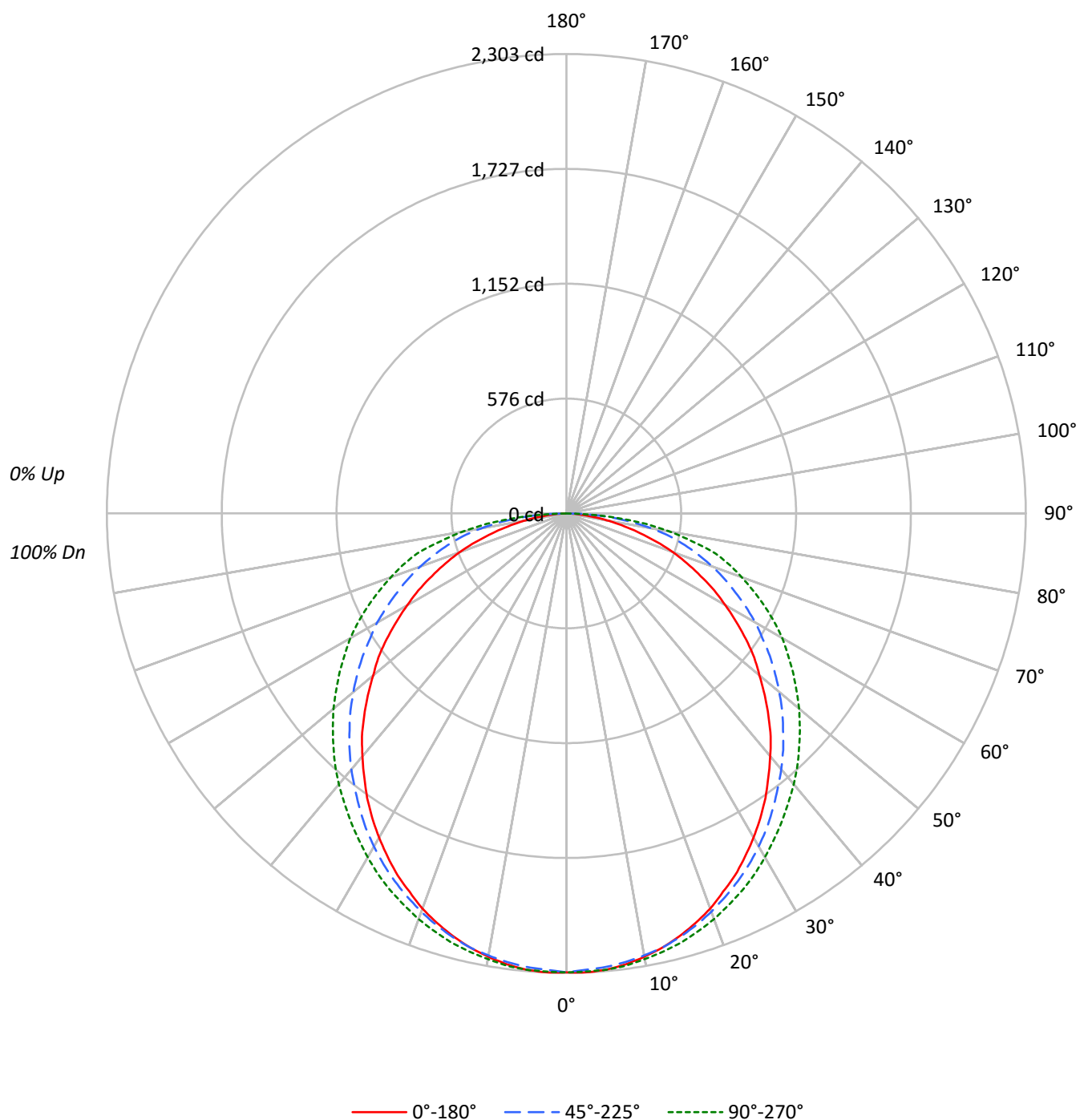
Input Watts (W): 64
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P311133

CATALOG NUMBER: 24FCZ2-75HE-UNV-L82765-CA125-W2A-U-4500K

Luminous Intensity Polar Plot





TEST NUMBER: P311133

CATALOG NUMBER: 24FCZ2-75HE-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°	3095	3095	3095
5°	3101	3082	3101
10°	3083	3074	3099
15°	3056	3063	3102
20°	3019	3042	3099
25°	2972	3020	3096
30°	2916	2995	3093
35°	2859	2965	3095
40°	2793	2943	3114
45°	2726	2924	3140
50°	2645	2916	3188
55°	2579	2921	3252
60°	2479	2946	3363
65°	2365	2977	3486
70°	2240	3068	3679
75°	1997	3201	4018
80°	1704	3389	4107
85°	1215	3359	3930



TEST NUMBER: P311133

CATALOG NUMBER: 24FCZ2-75HE-UNV-L82765-CA125-W2A-U-4500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	217.7	3.1
10°-20°	622.6	8.9
20°-30°	940.3	13.5
30°-40°	1133.3	16.2
40°-50°	1189.8	17.1
50°-60°	1113.1	16.0
60°-70°	919.2	13.2
70°-80°	626.4	9.0
80°-90°	213.6	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°	1780.6	25.5
0°-40°	2913.9	41.8
0°-60°	5216.8	74.8
0°-90°	6976.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6976.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2301	2301	2301	2301	2301	
5°	2296	2294	2282	2296	2296	218
15°	2194	2196	2199	2222	2227	618
25°	2002	2011	2034	2074	2085	921
35°	1740	1759	1805	1866	1884	1088
45°	1433	1463	1537	1620	1650	1105
55°	1099	1143	1245	1347	1386	981
65°	743	805	935	1053	1095	737
75°	384	472	616	731	773	410
85°	79	155	218	245	255	99
90°	0	0	0	0	0	



TEST NUMBER: P311133

CATALOG NUMBER: 24FCZ2-75HE-UNV-L82765-CA125-W2A-U-4500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2300.6	2300.6	2300.6	2300.6	2300.6
2.5°	2302.9	2300.6	2289.1	2300.6	2298.3
5°	2296.0	2293.7	2282.1	2296.0	2296.0
7.5°	2279.8	2279.8	2268.2	2284.4	2286.7
10°	2256.6	2256.6	2249.7	2268.2	2268.2
12.5°	2228.9	2228.9	2228.9	2247.4	2249.7
15°	2194.2	2196.5	2198.8	2221.9	2226.6
17.5°	2152.5	2157.1	2164.1	2191.8	2196.5
20°	2108.5	2113.1	2124.7	2157.1	2164.1
22.5°	2053.0	2064.5	2080.7	2117.8	2124.7
25°	2002.1	2011.3	2034.5	2073.8	2085.4
27.5°	1939.6	1953.4	1983.5	2025.2	2041.4
30°	1877.1	1891.0	1928.0	1976.6	1990.5
32.5°	1809.9	1830.8	1870.1	1921.0	1937.2
35°	1740.5	1759.0	1805.3	1865.5	1884.0
37.5°	1664.1	1689.6	1740.5	1805.3	1828.5
40°	1590.1	1617.8	1675.7	1745.1	1772.9
42.5°	1516.0	1543.8	1608.6	1687.3	1715.1
45°	1432.7	1462.8	1536.8	1620.2	1650.2
47.5°	1349.4	1386.4	1467.4	1555.4	1587.8
50°	1263.7	1305.4	1393.3	1485.9	1522.9
52.5°	1187.3	1226.7	1319.3	1418.8	1453.5
55°	1099.4	1143.4	1245.2	1347.0	1386.4
57.5°	1009.1	1057.7	1166.5	1277.6	1317.0
60°	921.2	974.4	1094.8	1205.9	1249.8
62.5°	835.5	888.8	1013.8	1129.5	1173.5
65°	743.0	805.4	935.1	1053.1	1094.8
67.5°	655.0	722.1	858.7	974.4	1016.1
70°	569.4	634.2	780.0	893.4	935.1
72.5°	476.8	550.9	696.7	814.7	858.7
75°	384.2	472.2	615.7	731.4	773.0
77.5°	298.6	388.8	532.3	627.2	648.1
80°	219.9	312.5	437.4	504.6	530.0
82.5°	141.2	233.8	333.3	381.9	402.7
85°	78.7	155.1	217.6	245.3	254.6
87.5°	32.4	67.1	88.0	99.5	99.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)