

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: P311131

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-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: P311131
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-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: 6707.0 lumens
Efficiency: N/A
Efficacy: 106.3 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

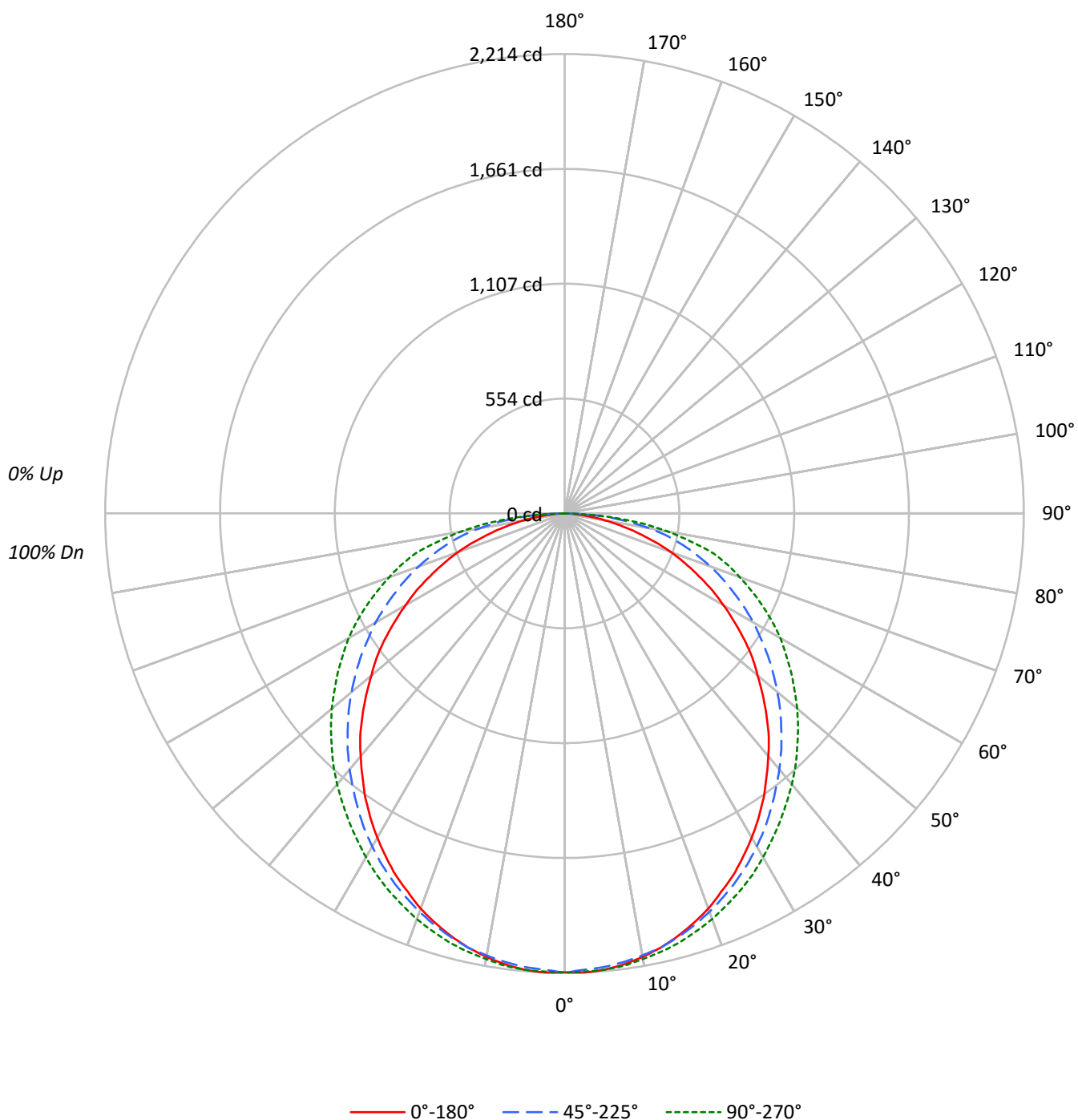
Input Watts (W): 63.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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°	2976	2976	2976
5°	2982	2963	2982
10°	2964	2955	2980
15°	2938	2945	2982
20°	2903	2925	2979
25°	2858	2904	2977
30°	2804	2880	2973
35°	2749	2851	2975
40°	2685	2830	2994
45°	2621	2812	3019
50°	2543	2804	3065
55°	2479	2808	3127
60°	2383	2832	3233
65°	2274	2862	3351
70°	2153	2950	3537
75°	1920	3077	3864
80°	1638	3259	3949
85°	1169	3230	3779



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	209.3	3.1
10°-20°	598.6	8.9
20°-30°	904.1	13.5
30°-40°	1089.6	16.2
40°-50°	1143.9	17.1
50°-60°	1070.2	16.0
60°-70°	883.8	13.2
70°-80°	602.2	9.0
80°-90°	205.4	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°	1712.0	25.5
0°-40°	2801.6	41.8
0°-60°	5015.6	74.8
0°-90°	6707.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6707.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2212	2212	2212	2212	2212	
5°	2208	2205	2194	2208	2208	209
15°	2110	2112	2114	2136	2141	595
25°	1925	1934	1956	1994	2005	886
35°	1673	1691	1736	1794	1811	1046
45°	1377	1406	1478	1558	1587	1062
55°	1057	1099	1197	1295	1333	943
65°	714	774	899	1012	1052	709
75°	369	454	592	703	743	394
85°	76	149	209	236	245	95
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2211.9	2211.9	2211.9	2211.9	2211.9
2.5°	2214.1	2211.9	2200.8	2211.9	2209.7
5°	2207.5	2205.2	2194.1	2207.5	2207.5
7.5°	2191.9	2191.9	2180.8	2196.3	2198.6
10°	2169.6	2169.6	2163.0	2180.8	2180.8
12.5°	2142.9	2142.9	2142.9	2160.7	2163.0
15°	2109.5	2111.8	2114.0	2136.3	2140.7
17.5°	2069.5	2073.9	2080.6	2107.3	2111.8
20°	2027.2	2031.7	2042.8	2073.9	2080.6
22.5°	1973.8	1984.9	2000.5	2036.1	2042.8
25°	1924.9	1933.8	1956.0	1993.8	2005.0
27.5°	1864.8	1878.1	1907.0	1947.1	1962.7
30°	1804.7	1818.0	1853.6	1900.4	1913.7
32.5°	1740.2	1760.2	1798.0	1847.0	1862.5
35°	1673.4	1691.2	1735.7	1793.6	1811.4
37.5°	1600.0	1624.4	1673.4	1735.7	1758.0
40°	1528.8	1555.5	1611.1	1677.8	1704.6
42.5°	1457.5	1484.2	1546.6	1622.2	1648.9
45°	1377.4	1406.4	1477.6	1557.7	1586.6
47.5°	1297.3	1332.9	1410.8	1495.4	1526.5
50°	1215.0	1255.0	1339.6	1428.6	1464.2
52.5°	1141.6	1179.4	1268.4	1364.1	1397.5
55°	1057.0	1099.3	1197.2	1295.1	1332.9
57.5°	970.2	1016.9	1121.5	1228.3	1266.2
60°	885.7	936.8	1052.5	1159.4	1201.6
62.5°	803.3	854.5	974.7	1085.9	1128.2
65°	714.3	774.4	899.0	1012.5	1052.5
67.5°	629.7	694.3	825.6	936.8	976.9
70°	547.4	609.7	749.9	859.0	899.0
72.5°	458.4	529.6	669.8	783.3	825.6
75°	369.4	454.0	591.9	703.2	743.2
77.5°	287.1	373.8	511.8	603.0	623.1
80°	211.4	300.4	420.6	485.1	509.6
82.5°	135.7	224.8	320.4	367.2	387.2
85°	75.7	149.1	209.2	235.9	244.8
87.5°	31.2	64.5	84.6	95.7	95.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)