

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: P311162

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-CP250-W2A-U-5500K**

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: P311162
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-CP250-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (336) 5500K 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: 6651.0 lumens
Efficiency: N/A
Efficacy: 103.0 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

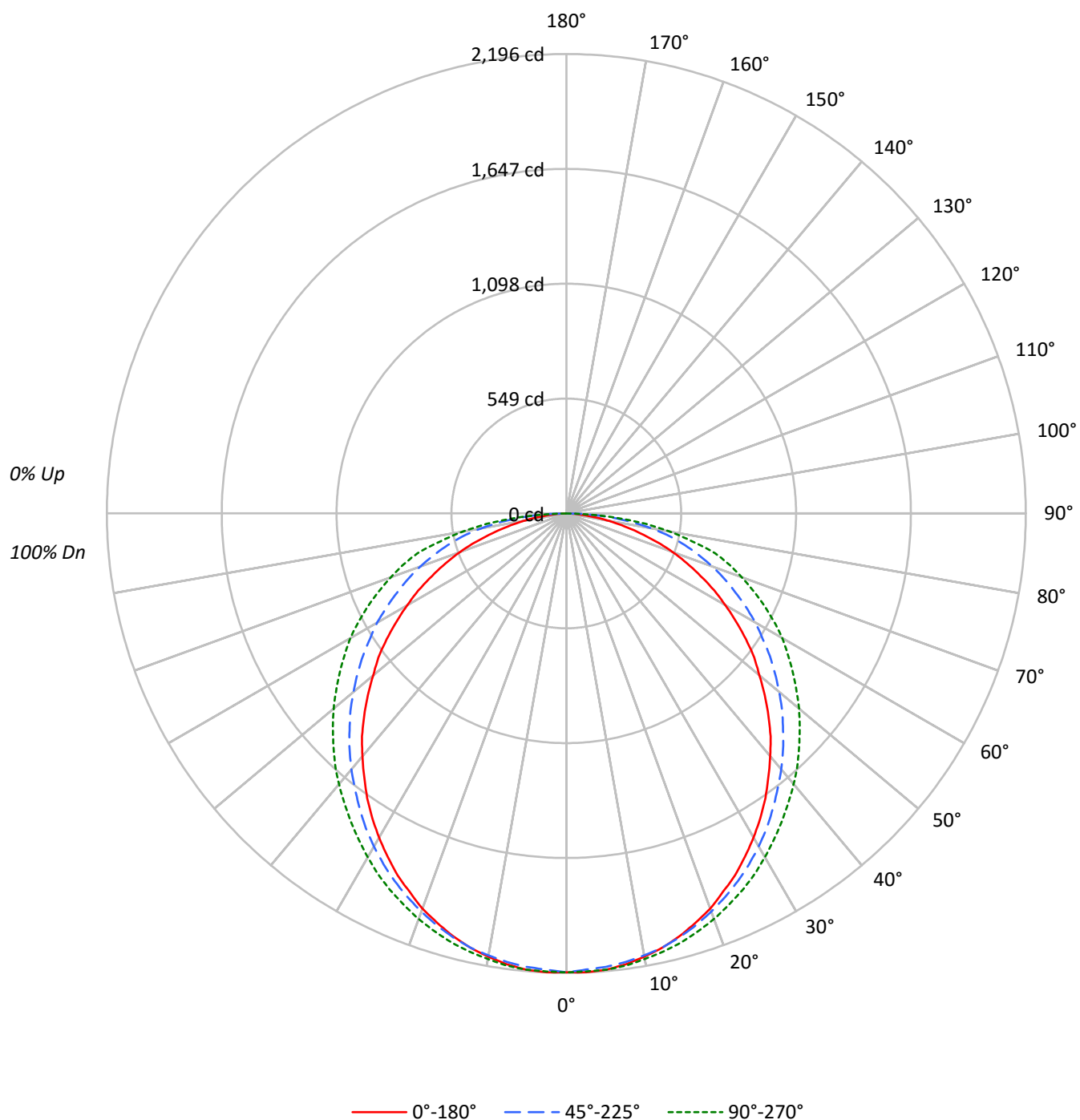
Input Watts (W): 64.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2951	2951	2951
5°	2957	2939	2957
10°	2939	2930	2955
15°	2914	2920	2957
20°	2878	2900	2954
25°	2834	2880	2952
30°	2780	2856	2948
35°	2726	2827	2950
40°	2663	2806	2969
45°	2599	2788	2994
50°	2522	2781	3039
55°	2459	2785	3101
60°	2363	2809	3207
65°	2255	2838	3323
70°	2135	2926	3507
75°	1904	3052	3831
80°	1624	3232	3915
85°	1158	3202	3747



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	207.6	3.1
10°-20°	593.6	8.9
20°-30°	896.5	13.5
30°-40°	1080.5	16.2
40°-50°	1134.3	17.1
50°-60°	1061.2	16.0
60°-70°	876.4	13.2
70°-80°	597.2	9.0
80°-90°	203.7	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°	1697.6	25.5
0°-40°	2778.2	41.8
0°-60°	4973.7	74.8
0°-90°	6651.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6651.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2193	2193	2193	2193	2193	
5°	2189	2187	2176	2189	2189	208
15°	2092	2094	2096	2118	2123	590
25°	1909	1918	1940	1977	1988	878
35°	1659	1677	1721	1779	1796	1037
45°	1366	1395	1465	1545	1573	1053
55°	1048	1090	1187	1284	1322	936
65°	708	768	892	1004	1044	703
75°	366	450	587	697	737	391
85°	75	148	207	234	243	94
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2193.4	2193.4	2193.4	2193.4	2193.4
2.5°	2195.6	2193.4	2182.4	2193.4	2191.2
5°	2189.0	2186.8	2175.8	2189.0	2189.0
7.5°	2173.6	2173.6	2162.5	2178.0	2180.2
10°	2151.5	2151.5	2144.9	2162.5	2162.5
12.5°	2125.0	2125.0	2125.0	2142.7	2144.9
15°	2091.9	2094.1	2096.3	2118.4	2122.8
17.5°	2052.2	2056.6	2063.2	2089.7	2094.1
20°	2010.3	2014.7	2025.7	2056.6	2063.2
22.5°	1957.3	1968.4	1983.8	2019.1	2025.7
25°	1908.8	1917.6	1939.7	1977.2	1988.2
27.5°	1849.2	1862.4	1891.1	1930.8	1946.3
30°	1789.6	1802.9	1838.2	1884.5	1897.7
32.5°	1725.6	1745.5	1783.0	1831.5	1847.0
35°	1659.4	1677.1	1721.2	1778.6	1796.2
37.5°	1586.6	1610.9	1659.4	1721.2	1743.3
40°	1516.0	1542.5	1597.6	1663.8	1690.3
42.5°	1445.4	1471.9	1533.6	1608.7	1635.2
45°	1365.9	1394.6	1465.2	1544.7	1573.4
47.5°	1286.5	1321.8	1399.0	1482.9	1513.8
50°	1204.8	1244.6	1328.4	1416.7	1452.0
52.5°	1132.0	1169.5	1257.8	1352.7	1385.8
55°	1048.2	1090.1	1187.2	1284.3	1321.8
57.5°	962.1	1008.5	1112.2	1218.1	1255.6
60°	878.3	929.0	1043.8	1149.7	1191.6
62.5°	796.6	847.4	966.5	1076.9	1118.8
65°	708.3	767.9	891.5	1004.0	1043.8
67.5°	624.5	688.5	818.7	929.0	968.7
70°	542.8	604.6	743.7	851.8	891.5
72.5°	454.6	525.2	664.2	776.8	818.7
75°	366.3	450.2	587.0	697.3	737.0
77.5°	284.7	370.7	507.5	598.0	617.9
80°	209.6	297.9	417.1	481.1	505.3
82.5°	134.6	222.9	317.8	364.1	384.0
85°	75.0	147.8	207.4	233.9	242.7
87.5°	30.9	64.0	83.9	94.9	94.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)