

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: P311136

Luminaire Tested: **24FCZ2-75HE-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: P311136
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-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: 7160.0 lumens
Efficiency: N/A
Efficacy: 110.8 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

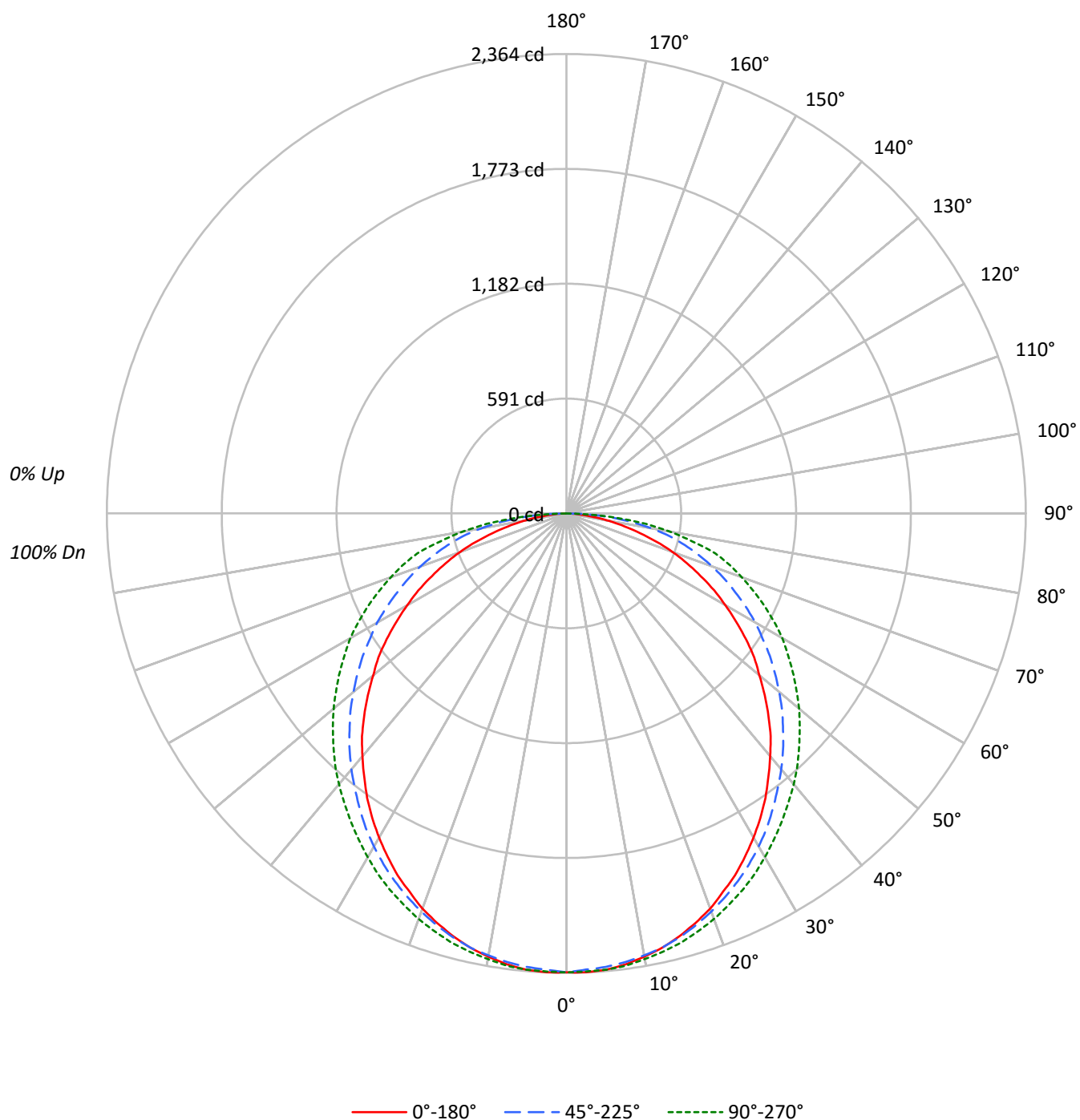
Input Watts (W): 64.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	108	103	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82		
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67		
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56		
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47		
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41		
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36		
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31		
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28		
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25		
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3177	3177	3177
5°	3183	3164	3183
10°	3164	3155	3181
15°	3137	3144	3183
20°	3099	3123	3180
25°	3051	3100	3178
30°	2993	3074	3174
35°	2934	3043	3176
40°	2866	3021	3196
45°	2798	3001	3223
50°	2715	2993	3272
55°	2647	2998	3338
60°	2544	3024	3452
65°	2428	3055	3577
70°	2299	3150	3775
75°	2050	3285	4125
80°	1749	3479	4215
85°	1247	3447	4034



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	223.5	3.1
10°-20°	639.0	8.9
20°-30°	965.1	13.5
30°-40°	1163.2	16.2
40°-50°	1221.2	17.1
50°-60°	1142.5	16.0
60°-70°	943.5	13.2
70°-80°	642.9	9.0
80°-90°	219.3	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°	1827.6	25.5
0°-40°	2990.8	41.8
0°-60°	5354.4	74.8
0°-90°	7160.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7160.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2361	2361	2361	2361	2361	
5°	2357	2354	2342	2357	2357	224
15°	2252	2254	2257	2280	2285	635
25°	2055	2064	2088	2128	2140	945
35°	1786	1805	1853	1915	1934	1116
45°	1470	1501	1577	1663	1694	1134
55°	1128	1174	1278	1383	1423	1007
65°	763	827	960	1081	1124	756
75°	394	485	632	751	793	420
85°	81	159	223	252	261	101
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2361.3	2361.3	2361.3	2361.3	2361.3
2.5°	2363.7	2361.3	2349.4	2361.3	2358.9
5°	2356.6	2354.2	2342.3	2356.6	2356.6
7.5°	2339.9	2339.9	2328.0	2344.7	2347.1
10°	2316.2	2316.2	2309.0	2328.0	2328.0
12.5°	2287.7	2287.7	2287.7	2306.7	2309.0
15°	2252.0	2254.4	2256.8	2280.5	2285.3
17.5°	2209.3	2214.0	2221.1	2249.7	2254.4
20°	2164.1	2168.9	2180.8	2214.0	2221.1
22.5°	2107.1	2119.0	2135.6	2173.6	2180.8
25°	2054.9	2064.4	2088.1	2128.5	2140.4
27.5°	1990.7	2005.0	2035.9	2078.6	2095.2
30°	1926.6	1940.8	1978.8	2028.7	2043.0
32.5°	1857.7	1879.1	1919.5	1971.7	1988.3
35°	1786.4	1805.4	1852.9	1914.7	1933.7
37.5°	1708.0	1734.2	1786.4	1852.9	1876.7
40°	1632.0	1660.5	1719.9	1791.2	1819.7
42.5°	1556.0	1584.5	1651.0	1731.8	1760.3
45°	1470.5	1501.4	1577.4	1662.9	1693.8
47.5°	1385.0	1423.0	1506.1	1596.4	1629.6
50°	1297.1	1339.8	1430.1	1525.1	1563.1
52.5°	1218.7	1259.0	1354.1	1456.2	1491.9
55°	1128.4	1173.5	1278.1	1382.6	1423.0
57.5°	1035.7	1085.6	1197.3	1311.3	1351.7
60°	945.5	1000.1	1123.6	1237.7	1282.8
62.5°	857.6	912.2	1040.5	1159.3	1204.4
65°	762.6	826.7	959.7	1080.9	1123.6
67.5°	672.3	741.2	881.3	1000.1	1042.9
70°	584.4	650.9	800.6	917.0	959.7
72.5°	489.4	565.4	715.0	836.2	881.3
75°	394.3	484.6	631.9	750.7	793.4
77.5°	306.4	399.1	546.4	643.8	665.2
80°	225.7	320.7	449.0	517.9	544.0
82.5°	144.9	239.9	342.1	392.0	413.3
85°	80.8	159.2	223.3	251.8	261.3
87.5°	33.3	68.9	90.3	102.1	102.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)