

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: P311765

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-S-CA125-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: P311765
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-70HE-UNV-L82765-S-CA125-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC 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: 7018.0 lumens
Efficiency: N/A
Efficacy: 118.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

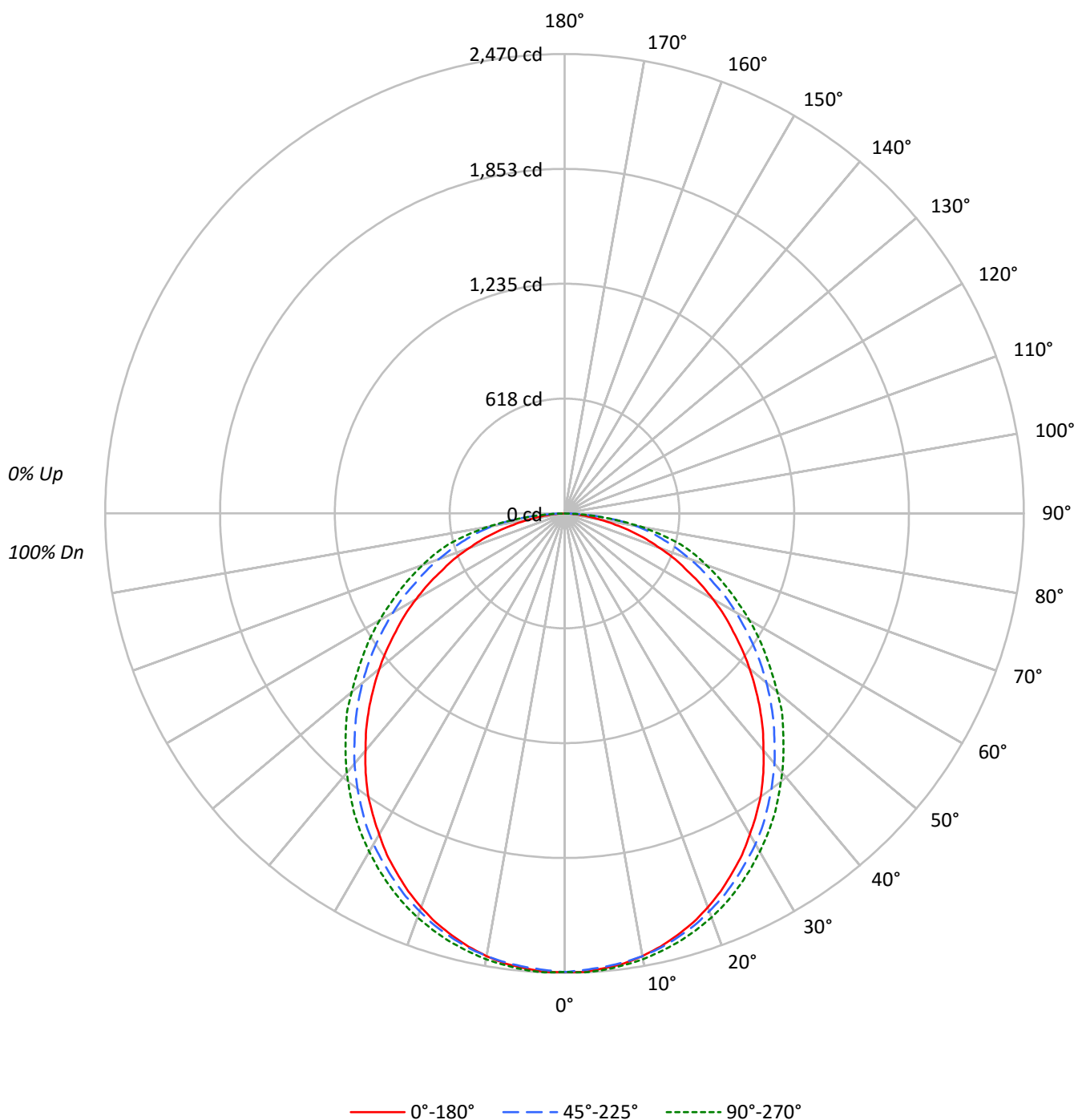
Input Watts (W): 59.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90		93	90	88		83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3317	3317	3317
5°	3315	3306	3327
10°	3301	3301	3326
15°	3270	3285	3319
20°	3227	3259	3310
25°	3167	3227	3290
30°	3096	3190	3262
35°	3028	3138	3237
40°	2925	3085	3199
45°	2829	3024	3164
50°	2720	2968	3126
55°	2599	2913	3096
60°	2477	2867	3089
65°	2321	2818	3109
70°	2148	2832	3192
75°	1923	2886	3372
80°	1554	3058	3299
85°	1170	2685	2615



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	233.4	3.3
10°-20°	666.9	9.5
20°-30°	1002.5	14.3
30°-40°	1194.2	17.0
40°-50°	1222.2	17.4
50°-60°	1100.3	15.7
60°-70°	864.1	12.3
70°-80°	560.8	8.0
80°-90°	173.4	2.5
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°	1902.9	27.1
0°-40°	3097.1	44.1
0°-60°	5419.6	77.2
0°-90°	7018.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7018.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2466	2466	2466	2466	2466	
5°	2454	2459	2448	2461	2463	233
15°	2347	2354	2358	2378	2383	662
25°	2133	2151	2173	2209	2216	983
35°	1844	1866	1910	1957	1971	1150
45°	1487	1522	1589	1650	1663	1146
55°	1108	1157	1242	1306	1320	993
65°	729	785	885	958	976	726
75°	370	441	555	631	649	392
85°	76	140	174	169	169	92
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2465.5	2465.5	2465.5	2465.5	2465.5
2.5°	2467.7	2467.7	2456.6	2467.7	2469.9
5°	2454.3	2458.8	2447.6	2461.0	2463.2
7.5°	2440.9	2440.9	2434.3	2447.6	2449.9
10°	2416.4	2418.7	2416.4	2432.0	2434.3
12.5°	2385.2	2389.7	2391.9	2407.5	2409.7
15°	2347.3	2354.0	2358.5	2378.5	2383.0
17.5°	2305.0	2311.7	2322.8	2345.1	2349.6
20°	2253.7	2262.6	2276.0	2305.0	2311.7
22.5°	2198.0	2206.9	2229.2	2255.9	2267.1
25°	2133.3	2151.2	2173.4	2209.1	2215.8
27.5°	2068.7	2084.3	2113.3	2151.2	2160.1
30°	1992.9	2017.4	2053.1	2091.0	2099.9
32.5°	1919.3	1943.8	1986.2	2026.3	2037.5
35°	1843.5	1865.8	1910.4	1957.2	1970.6
37.5°	1756.6	1785.6	1834.6	1881.4	1894.8
40°	1665.2	1700.9	1756.6	1805.6	1821.2
42.5°	1578.3	1616.2	1671.9	1725.4	1743.2
45°	1486.9	1522.5	1589.4	1649.6	1663.0
47.5°	1393.2	1433.4	1504.7	1564.9	1587.2
50°	1299.6	1342.0	1417.8	1480.2	1493.5
52.5°	1206.0	1250.6	1330.8	1397.7	1404.4
55°	1107.9	1156.9	1241.7	1306.3	1319.7
57.5°	1018.7	1061.1	1152.5	1219.4	1235.0
60°	920.6	967.5	1065.5	1128.0	1148.0
62.5°	827.0	876.1	978.6	1041.0	1058.9
65°	728.9	784.7	885.0	958.5	976.4
67.5°	644.2	697.7	804.7	876.1	893.9
70°	546.1	606.3	720.0	793.6	811.4
72.5°	461.4	523.9	637.5	708.9	735.6
75°	370.0	441.4	555.1	630.9	648.7
77.5°	280.9	363.4	479.3	537.2	537.2
80°	200.6	287.6	394.6	421.3	425.8
82.5°	131.5	216.2	292.0	289.8	289.8
85°	75.8	140.4	173.9	169.4	169.4
87.5°	29.0	58.0	62.4	62.4	60.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)