

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: P311767

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-S-CA125-W2A-U-6500K**

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: P311767
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-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 6500K 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: 7055.0 lumens
Efficiency: N/A
Efficacy: 117.0 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

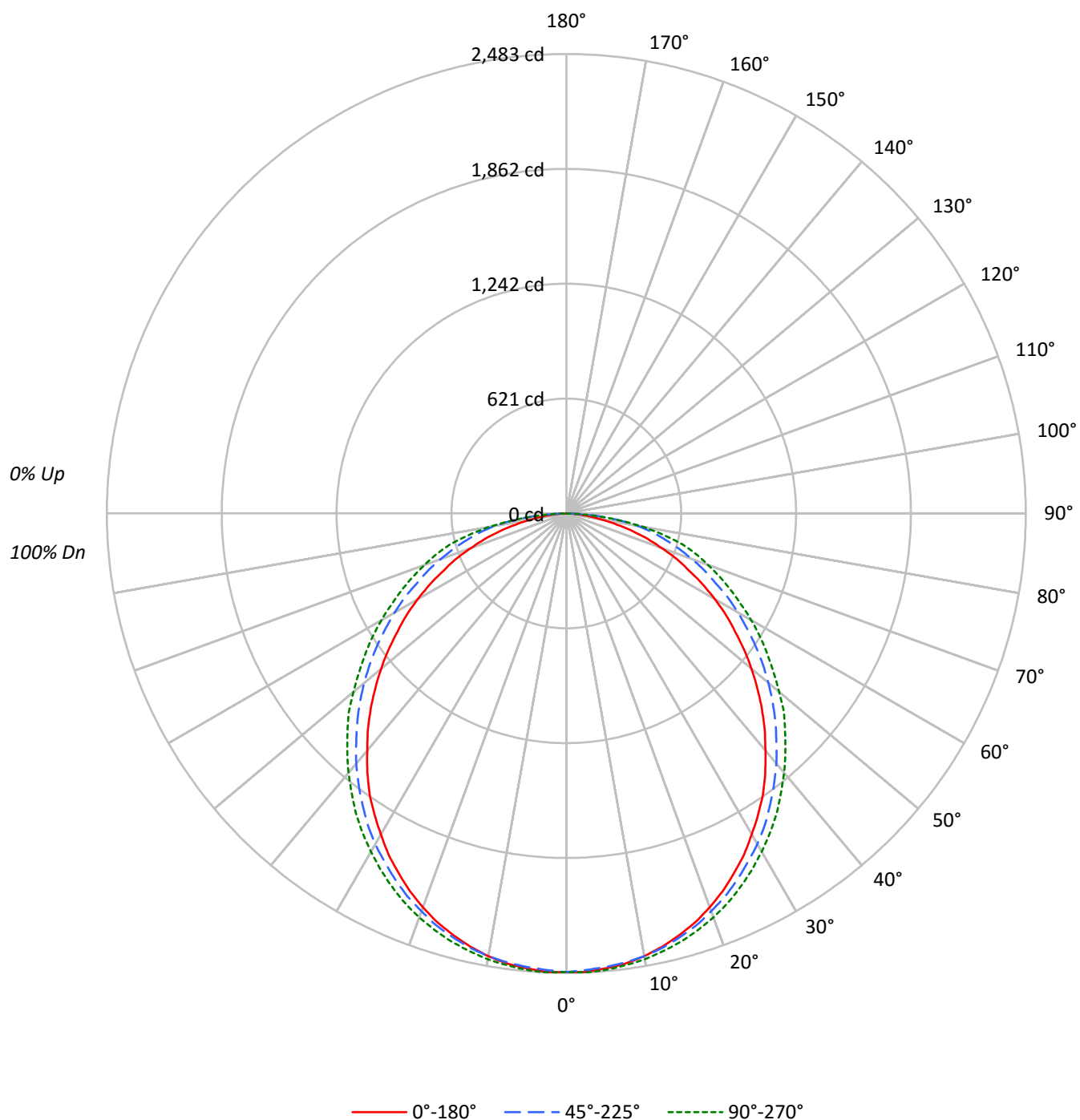
Input Watts (W): 60.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3335	3335	3335
5°	3332	3323	3344
10°	3319	3319	3343
15°	3287	3303	3337
20°	3244	3276	3327
25°	3184	3244	3307
30°	3113	3207	3280
35°	3044	3154	3254
40°	2940	3102	3216
45°	2844	3040	3181
50°	2735	2983	3143
55°	2613	2928	3112
60°	2491	2883	3106
65°	2333	2832	3125
70°	2160	2847	3209
75°	1934	2901	3390
80°	1563	3073	3316
85°	1176	2699	2629



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	234.6	3.3
10°-20°	670.4	9.5
20°-30°	1007.8	14.3
30°-40°	1200.5	17.0
40°-50°	1228.6	17.4
50°-60°	1106.1	15.7
60°-70°	868.7	12.3
70°-80°	563.8	8.0
80°-90°	174.4	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°	1912.9	27.1
0°-40°	3113.4	44.1
0°-60°	5448.2	77.2
0°-90°	7055.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7055.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2478	2478	2478	2478	2478	
5°	2467	2472	2460	2474	2476	234
15°	2360	2366	2371	2391	2396	665
25°	2145	2162	2185	2221	2228	988
35°	1853	1876	1920	1968	1981	1156
45°	1495	1531	1598	1658	1672	1152
55°	1114	1163	1248	1313	1327	998
65°	733	789	890	964	982	729
75°	372	444	558	634	652	394
85°	76	141	175	170	170	92
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2478.5	2478.5	2478.5	2478.5	2478.5
2.5°	2480.7	2480.7	2469.5	2480.7	2482.9
5°	2467.3	2471.7	2460.5	2474.0	2476.2
7.5°	2453.8	2453.8	2447.1	2460.5	2462.8
10°	2429.2	2431.4	2429.2	2444.9	2447.1
12.5°	2397.8	2402.3	2404.5	2420.2	2422.4
15°	2359.7	2366.4	2370.9	2391.1	2395.6
17.5°	2317.1	2323.8	2335.0	2357.5	2361.9
20°	2265.6	2274.5	2288.0	2317.1	2323.8
22.5°	2209.6	2218.5	2240.9	2267.8	2279.0
25°	2144.6	2162.5	2184.9	2220.8	2227.5
27.5°	2079.6	2095.3	2124.4	2162.5	2171.5
30°	2003.4	2028.0	2063.9	2102.0	2111.0
32.5°	1929.4	1954.1	1996.7	2037.0	2048.2
35°	1853.2	1875.7	1920.5	1967.5	1981.0
37.5°	1765.9	1795.0	1844.3	1891.3	1904.8
40°	1674.0	1709.8	1765.9	1815.2	1830.8
42.5°	1586.6	1624.7	1680.7	1734.5	1752.4
45°	1494.7	1530.6	1597.8	1658.3	1671.7
47.5°	1400.6	1440.9	1512.6	1573.1	1595.5
50°	1306.5	1349.0	1425.2	1488.0	1501.4
52.5°	1212.3	1257.2	1337.8	1405.1	1411.8
55°	1113.7	1163.0	1248.2	1313.2	1326.6
57.5°	1024.1	1066.7	1158.6	1225.8	1241.5
60°	925.5	972.6	1071.2	1133.9	1154.1
62.5°	831.4	880.7	983.8	1046.5	1064.4
65°	732.8	788.8	889.6	963.6	981.5
67.5°	647.6	701.4	809.0	880.7	898.6
70°	549.0	609.5	723.8	797.8	815.7
72.5°	463.9	526.6	640.9	712.6	739.5
75°	372.0	443.7	558.0	634.2	652.1
77.5°	282.4	365.3	481.8	540.1	540.1
80°	201.7	289.1	396.6	423.5	428.0
82.5°	132.2	217.4	293.6	291.3	291.3
85°	76.2	141.2	174.8	170.3	170.3
87.5°	29.1	58.3	62.7	62.7	60.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)