

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: P311775

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-S-CP125-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: P311775
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-CP125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB 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: 6900.0 lumens
Efficiency: N/A
Efficacy: 116.4 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

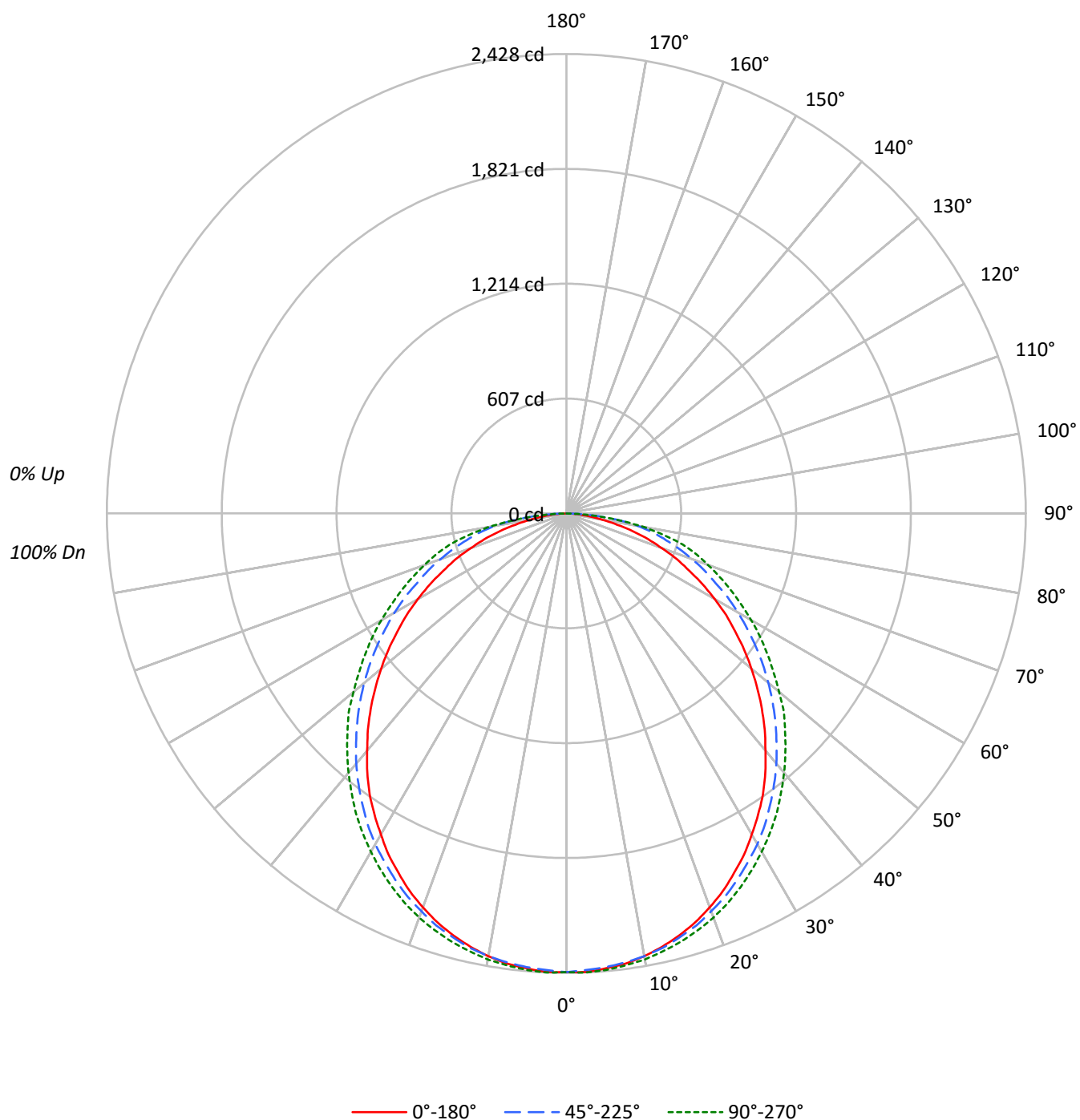
Input Watts (W): 59.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3261	3261	3261
5°	3259	3250	3271
10°	3246	3246	3270
15°	3215	3230	3264
20°	3173	3204	3254
25°	3114	3172	3234
30°	3044	3136	3208
35°	2977	3085	3182
40°	2876	3033	3145
45°	2782	2974	3111
50°	2675	2918	3074
55°	2555	2864	3044
60°	2436	2819	3037
65°	2282	2770	3056
70°	2113	2785	3139
75°	1891	2837	3316
80°	1529	3006	3243
85°	1150	2640	2572



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	229.5	3.3
10°-20°	655.7	9.5
20°-30°	985.7	14.3
30°-40°	1174.1	17.0
40°-50°	1201.7	17.4
50°-60°	1081.8	15.7
60°-70°	849.6	12.3
70°-80°	551.4	8.0
80°-90°	170.5	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°	1870.9	27.1
0°-40°	3045.0	44.1
0°-60°	5328.5	77.2
0°-90°	6900.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6900.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2424	2424	2424	2424	2424	
5°	2413	2417	2406	2420	2422	229
15°	2308	2314	2319	2338	2343	651
25°	2098	2115	2137	2172	2178	966
35°	1812	1834	1878	1924	1938	1131
45°	1462	1497	1563	1622	1635	1127
55°	1089	1138	1221	1284	1298	977
65°	717	772	870	942	960	713
75°	364	434	546	620	638	385
85°	74	138	171	167	167	90
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2424.0	2424.0	2424.0	2424.0	2424.0
2.5°	2426.2	2426.2	2415.2	2426.2	2428.4
5°	2413.1	2417.4	2406.5	2419.6	2421.8
7.5°	2399.9	2399.9	2393.3	2406.5	2408.7
10°	2375.8	2378.0	2375.8	2391.1	2393.3
12.5°	2345.1	2349.5	2351.7	2367.0	2369.2
15°	2307.9	2314.4	2318.8	2338.5	2342.9
17.5°	2266.2	2272.8	2283.7	2305.7	2310.0
20°	2215.8	2224.6	2237.7	2266.2	2272.8
22.5°	2161.0	2169.8	2191.7	2218.0	2229.0
25°	2097.5	2115.0	2136.9	2172.0	2178.5
27.5°	2033.9	2049.2	2077.7	2115.0	2123.8
30°	1959.4	1983.5	2018.6	2055.8	2064.6
32.5°	1887.0	1911.2	1952.8	1992.3	2003.2
35°	1812.5	1834.4	1878.3	1924.3	1937.5
37.5°	1727.1	1755.5	1803.8	1849.8	1862.9
40°	1637.2	1672.3	1727.1	1775.3	1790.6
42.5°	1551.7	1589.0	1643.8	1696.4	1713.9
45°	1461.9	1496.9	1562.7	1621.9	1635.0
47.5°	1369.8	1409.3	1479.4	1538.6	1560.5
50°	1277.8	1319.4	1393.9	1455.3	1468.4
52.5°	1185.7	1229.5	1308.4	1374.2	1380.8
55°	1089.3	1137.5	1220.8	1284.3	1297.5
57.5°	1001.6	1043.2	1133.1	1198.9	1214.2
60°	905.2	951.2	1047.6	1109.0	1128.7
62.5°	813.1	861.3	962.2	1023.5	1041.1
65°	716.7	771.5	870.1	942.4	960.0
67.5°	633.4	686.0	791.2	861.3	878.9
70°	537.0	596.1	707.9	780.2	797.8
72.5°	453.7	515.0	626.8	697.0	723.3
75°	363.8	434.0	545.7	620.2	637.8
77.5°	276.2	357.2	471.2	528.2	528.2
80°	197.3	282.7	387.9	414.2	418.6
82.5°	129.3	212.6	287.1	284.9	284.9
85°	74.5	138.1	171.0	166.6	166.6
87.5°	28.5	57.0	61.4	61.4	59.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)