

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: P311766

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-S-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: P311766
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-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH 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

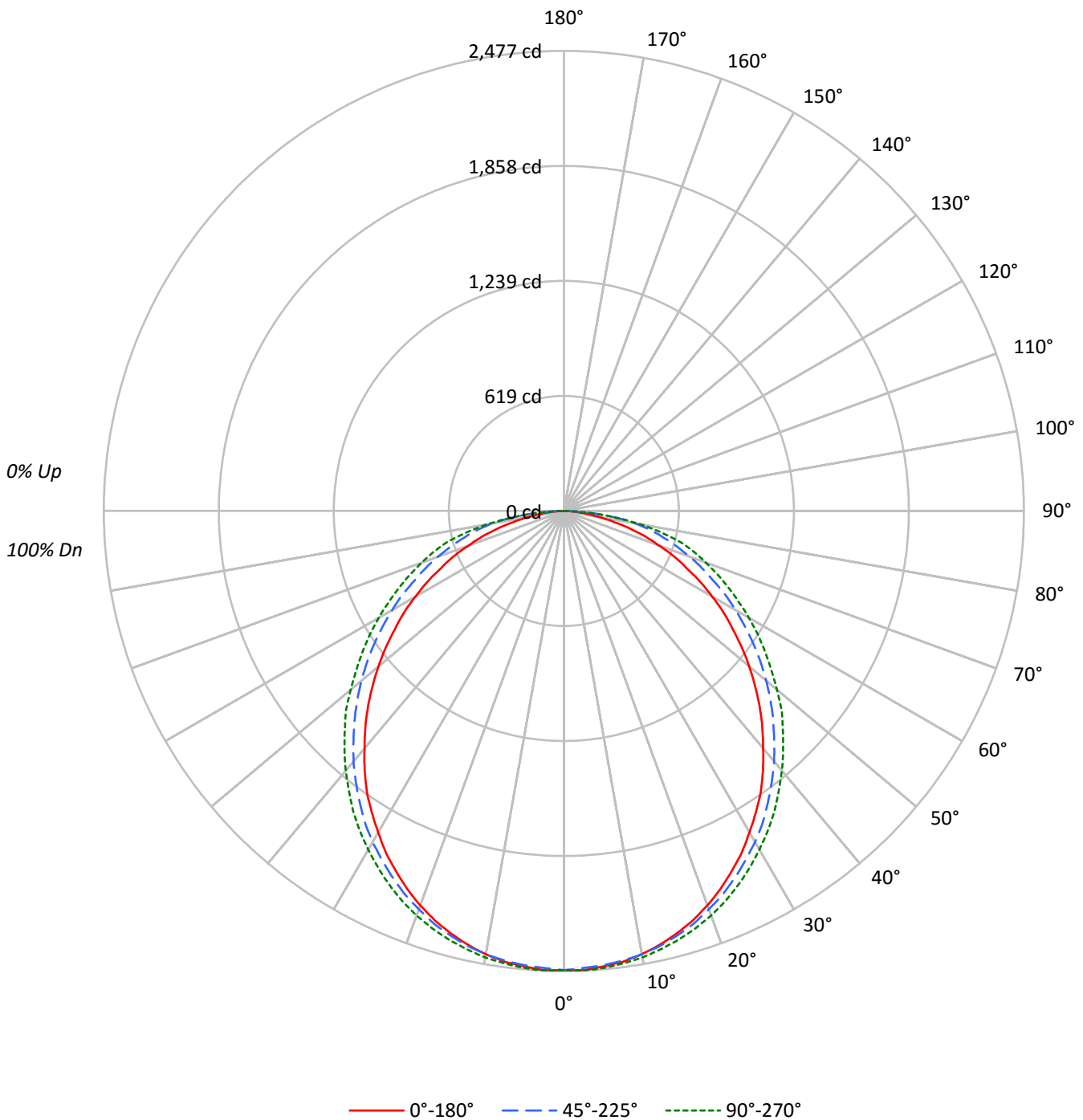
Lumens per Lamp: N/A
Luminaire Lumens: 7037.0 lumens
Efficiency: N/A
Efficacy: 118.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 59.3
Input Voltage (V): NR
Input Current (A_{in}): 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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CATALOG NUMBER: 24FC22-70HE-UNV-L82765-S-CA125-W2A-U-5700K

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	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	102	102	102	100
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3326	3326	3326
5°	3324	3315	3336
10°	3310	3310	3335
15°	3279	3294	3328
20°	3236	3268	3319
25°	3176	3235	3298
30°	3105	3198	3271
35°	3036	3146	3245
40°	2933	3094	3208
45°	2837	3033	3173
50°	2728	2976	3135
55°	2606	2921	3104
60°	2484	2875	3098
65°	2327	2825	3117
70°	2154	2840	3201
75°	1929	2894	3381
80°	1559	3065	3308
85°	1173	2691	2623



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	234.0	3.3
10°-20°	668.7	9.5
20°-30°	1005.3	14.3
30°-40°	1197.4	17.0
40°-50°	1225.5	17.4
50°-60°	1103.3	15.7
60°-70°	866.4	12.3
70°-80°	562.4	8.0
80°-90°	173.9	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°	1908.0	27.1
0°-40°	3105.5	44.1
0°-60°	5434.3	77.2
0°-90°	7037.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7037.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2472	2472	2472	2472	2472	
5°	2461	2465	2454	2468	2470	234
15°	2354	2360	2365	2385	2389	664
25°	2139	2157	2179	2215	2222	985
35°	1848	1871	1916	1962	1976	1153
45°	1491	1527	1594	1654	1668	1149
55°	1111	1160	1245	1310	1323	996
65°	731	787	887	961	979	728
75°	371	443	557	633	650	393
85°	76	141	174	170	170	92
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2472.1	2472.1	2472.1	2472.1	2472.1
2.5°	2474.4	2474.4	2463.2	2474.4	2476.6
5°	2461.0	2465.4	2454.3	2467.7	2469.9
7.5°	2447.6	2447.6	2440.9	2454.3	2456.5
10°	2423.0	2425.2	2423.0	2438.6	2440.9
12.5°	2391.7	2396.1	2398.4	2414.0	2416.3
15°	2353.7	2360.4	2364.9	2385.0	2389.4
17.5°	2311.2	2317.9	2329.1	2351.4	2355.9
20°	2259.8	2268.7	2282.2	2311.2	2317.9
22.5°	2203.9	2212.9	2235.2	2262.0	2273.2
25°	2139.1	2157.0	2179.3	2215.1	2221.8
27.5°	2074.3	2089.9	2119.0	2157.0	2165.9
30°	1998.3	2022.9	2058.6	2096.6	2105.6
32.5°	1924.5	1949.1	1991.6	2031.8	2043.0
35°	1848.5	1870.9	1915.6	1962.5	1975.9
37.5°	1761.3	1790.4	1839.6	1886.5	1899.9
40°	1669.7	1705.5	1761.3	1810.5	1826.2
42.5°	1582.5	1620.5	1676.4	1730.1	1747.9
45°	1490.9	1526.6	1593.7	1654.1	1667.5
47.5°	1397.0	1437.2	1508.8	1569.1	1591.5
50°	1303.1	1345.6	1421.6	1484.2	1497.6
52.5°	1209.2	1254.0	1334.4	1401.5	1408.2
55°	1110.9	1160.1	1245.0	1309.8	1323.2
57.5°	1021.5	1064.0	1155.6	1222.7	1238.3
60°	923.1	970.1	1068.4	1131.0	1151.1
62.5°	829.3	878.4	981.3	1043.8	1061.7
65°	730.9	786.8	887.4	961.1	979.0
67.5°	646.0	699.6	806.9	878.4	896.3
70°	547.6	608.0	722.0	795.7	813.6
72.5°	462.7	525.3	639.3	710.8	737.6
75°	371.0	442.6	556.6	632.6	650.4
77.5°	281.6	364.3	480.6	538.7	538.7
80°	201.2	288.3	395.6	422.5	426.9
82.5°	131.9	216.8	292.8	290.6	290.6
85°	76.0	140.8	174.3	169.9	169.9
87.5°	29.1	58.1	62.6	62.6	60.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)