

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: P314495

Luminaire Tested: **24FCZ2-70HE-UNV-L83050-S-CA125-W2A-U-3000K**

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: P314495
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-L83050-S-CA125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 3000K 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: 6378.0 lumens
Efficiency: N/A
Efficacy: 110.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

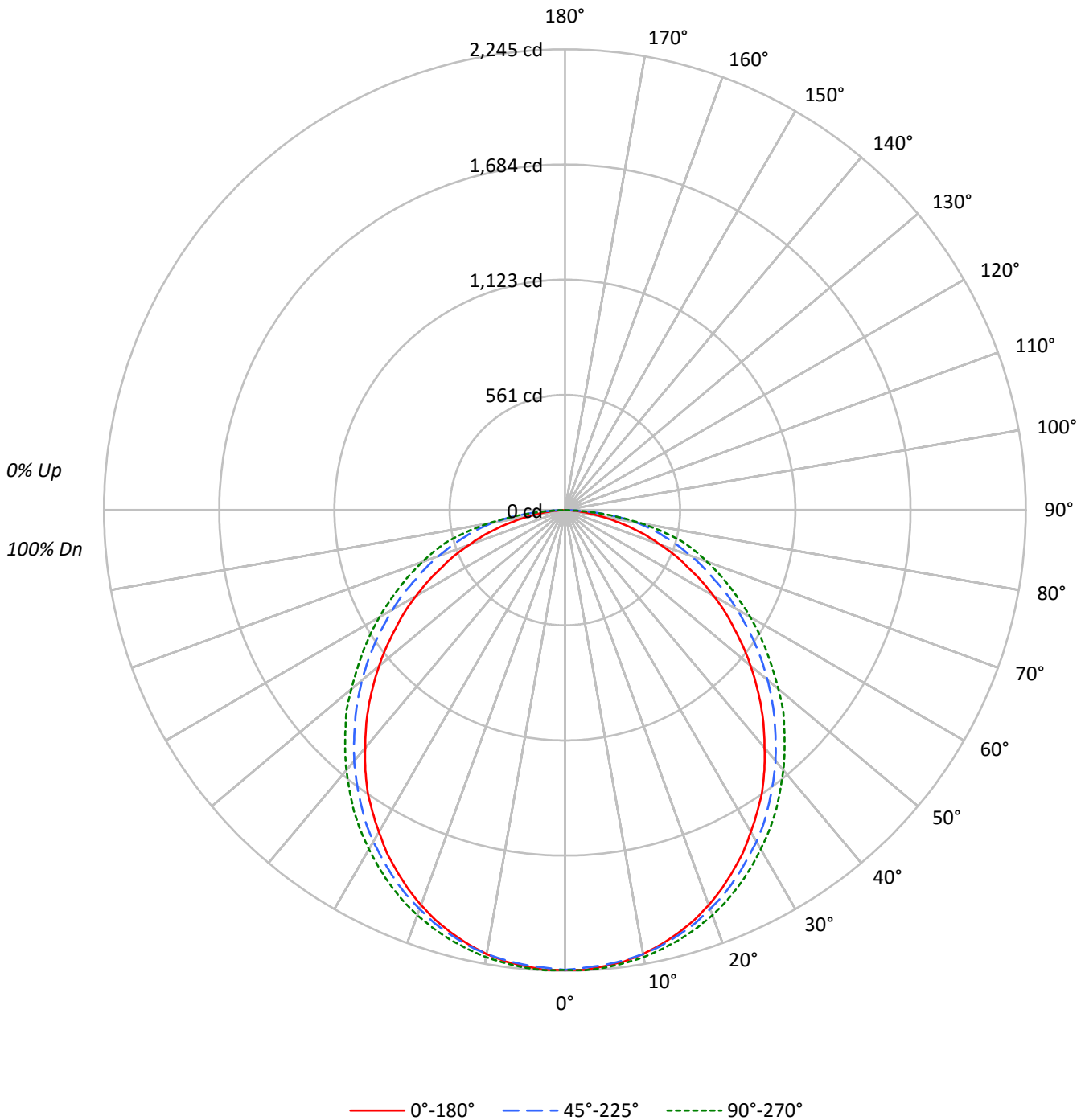
Input Watts (W): 57.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 24FC22-70HE-UNV-L83050-S-CA125-W2A-U-3000K

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°	3015	3015	3015
5°	3013	3004	3024
10°	3000	3000	3023
15°	2972	2986	3017
20°	2933	2962	3008
25°	2878	2932	2990
30°	2814	2899	2965
35°	2752	2852	2942
40°	2658	2804	2907
45°	2571	2749	2876
50°	2472	2697	2841
55°	2362	2647	2813
60°	2252	2606	2807
65°	2109	2561	2825
70°	1952	2574	2901
75°	1748	2622	3065
80°	1413	2779	2998
85°	1064	2439	2377



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	212.1	3.3
10°-20°	606.1	9.5
20°-30°	911.1	14.3
30°-40°	1085.3	17.0
40°-50°	1110.7	17.4
50°-60°	1000.0	15.7
60°-70°	785.3	12.3
70°-80°	509.7	8.0
80°-90°	157.6	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°	1729.3	27.1
0°-40°	2814.6	44.1
0°-60°	4925.4	77.2
0°-90°	6378.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6378.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2241	2241	2241	2241	2241	
5°	2230	2235	2224	2237	2239	212
15°	2133	2139	2143	2162	2166	602
25°	1939	1955	1975	2008	2014	893
35°	1675	1696	1736	1779	1791	1045
45°	1351	1384	1444	1499	1511	1042
55°	1007	1051	1128	1187	1199	903
65°	662	713	804	871	887	659
75°	336	401	504	573	590	356
85°	69	128	158	154	154	83
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2240.6	2240.6	2240.6	2240.6	2240.6
2.5°	2242.7	2242.7	2232.5	2242.7	2244.7
5°	2230.5	2234.6	2224.4	2236.6	2238.6
7.5°	2218.3	2218.3	2212.3	2224.4	2226.5
10°	2196.1	2198.1	2196.1	2210.2	2212.3
12.5°	2167.7	2171.8	2173.8	2188.0	2190.0
15°	2133.3	2139.3	2143.4	2161.6	2165.7
17.5°	2094.8	2100.8	2111.0	2131.2	2135.3
20°	2048.2	2056.3	2068.4	2094.8	2100.8
22.5°	1997.5	2005.6	2025.9	2050.2	2060.3
25°	1938.8	1955.0	1975.2	2007.7	2013.7
27.5°	1880.0	1894.2	1920.5	1955.0	1963.1
30°	1811.1	1833.4	1865.8	1900.3	1908.4
32.5°	1744.3	1766.6	1805.1	1841.5	1851.7
35°	1675.4	1695.7	1736.2	1778.7	1790.9
37.5°	1596.4	1622.7	1667.3	1709.9	1722.0
40°	1513.3	1545.8	1596.4	1641.0	1655.2
42.5°	1434.3	1468.8	1519.4	1568.0	1584.2
45°	1351.3	1383.7	1444.5	1499.2	1511.3
47.5°	1266.2	1302.6	1367.5	1422.2	1442.4
50°	1181.1	1219.6	1288.5	1345.2	1357.3
52.5°	1096.0	1136.5	1209.5	1270.2	1276.3
55°	1006.9	1051.4	1128.4	1187.2	1199.3
57.5°	925.8	964.3	1047.4	1108.2	1122.3
60°	836.7	879.2	968.4	1025.1	1043.3
62.5°	751.6	796.2	889.4	946.1	962.3
65°	662.5	713.1	804.3	871.1	887.3
67.5°	585.5	634.1	731.3	796.2	812.4
70°	496.3	551.0	654.4	721.2	737.4
72.5°	419.4	476.1	579.4	644.2	668.5
75°	336.3	401.1	504.4	573.3	589.5
77.5°	255.3	330.2	435.6	488.2	488.2
80°	182.3	261.3	358.6	382.9	386.9
82.5°	119.5	196.5	265.4	263.4	263.4
85°	68.9	127.6	158.0	154.0	154.0
87.5°	26.3	52.7	56.7	56.7	54.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)