

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: P314128

Luminaire Tested: **24FCZ2-70HE-UNV-L83050-CP125-W2A-U-4500K**

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: P314128
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 4500K 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: 6676.0 lumens
Efficiency: N/A
Efficacy: 110.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

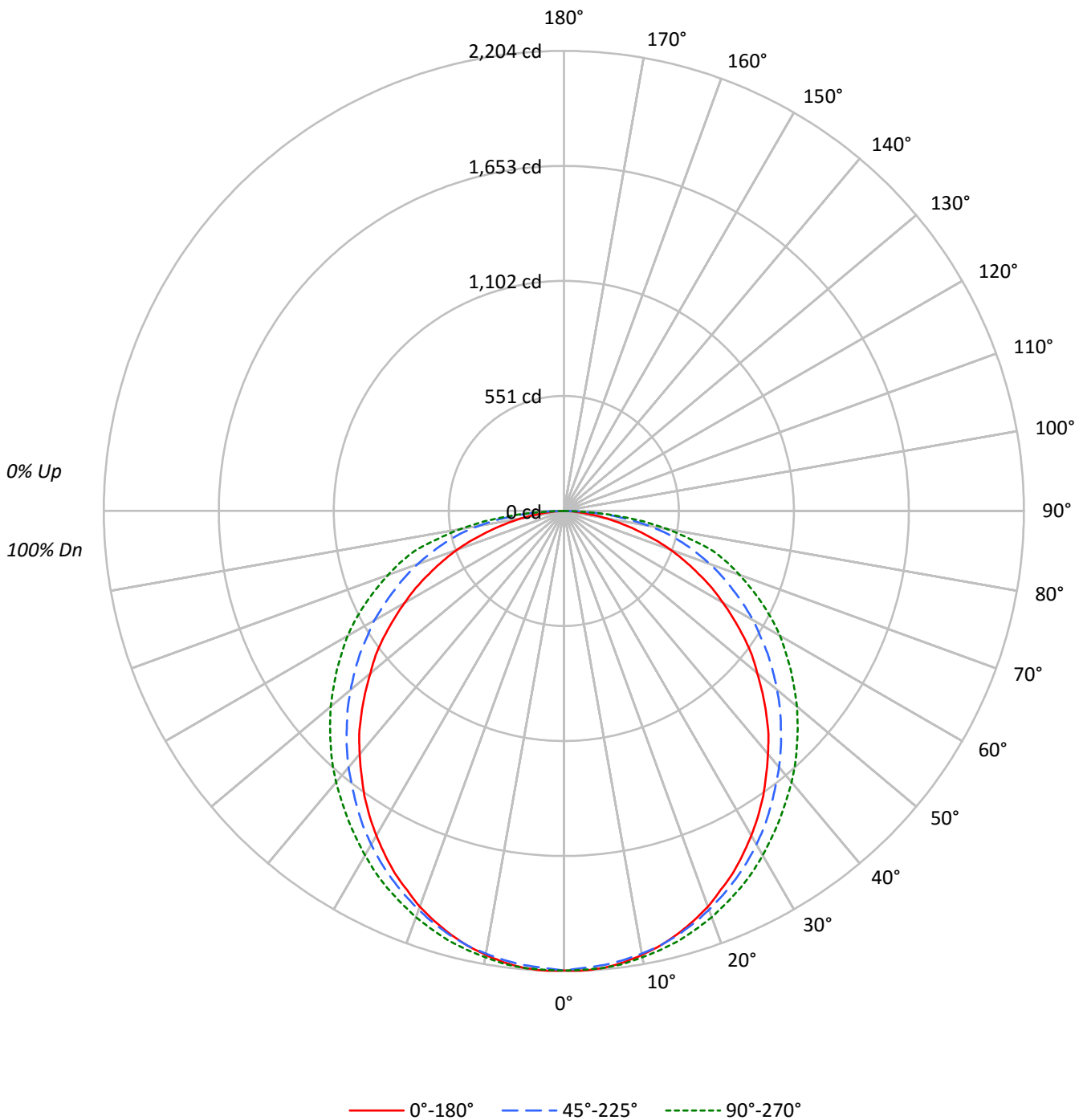
Input Watts (W): 60.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P314128

CATALOG NUMBER: 24FCZ2-70HE-UNV-L83050-CP125-W2A-U-4500K

Luminous Intensity Polar Plot





TEST NUMBER: P314128

CATALOG NUMBER: 24FCZ2-70HE-UNV-L83050-CP125-W2A-U-4500K

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	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2962	2962	2962
5°	2968	2950	2968
10°	2951	2942	2966
15°	2925	2931	2968
20°	2889	2911	2965
25°	2844	2890	2963
30°	2791	2867	2960
35°	2736	2838	2961
40°	2673	2817	2980
45°	2609	2798	3005
50°	2532	2791	3051
55°	2468	2795	3112
60°	2372	2819	3219
65°	2264	2849	3336
70°	2144	2936	3520
75°	1912	3063	3846
80°	1630	3243	3930
85°	1162	3214	3761



TEST NUMBER: P314128

CATALOG NUMBER: 24FCZ2-70HE-UNV-L83050-CP125-W2A-U-4500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	208.4	3.1
10°-20°	595.8	8.9
20°-30°	899.9	13.5
30°-40°	1084.6	16.2
40°-50°	1138.6	17.1
50°-60°	1065.2	16.0
60°-70°	879.7	13.2
70°-80°	599.4	9.0
80°-90°	204.4	3.1
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°	1704.0	25.5
0°-40°	2788.6	41.8
0°-60°	4992.4	74.8
0°-90°	6676.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6676.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2202	2202	2202	2202	2202	
5°	2197	2195	2184	2197	2197	208
15°	2100	2102	2104	2126	2131	592
25°	1916	1925	1947	1985	1996	882
35°	1666	1683	1728	1785	1803	1041
45°	1371	1400	1471	1550	1579	1057
55°	1052	1094	1192	1289	1327	939
65°	711	771	895	1008	1048	705
75°	368	452	589	700	740	392
85°	75	148	208	235	244	94
90°	0	0	0	0	0	



TEST NUMBER: P314128

CATALOG NUMBER: 24FCZ2-70HE-UNV-L83050-CP125-W2A-U-4500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2201.7	2201.7	2201.7	2201.7	2201.7
2.5°	2203.9	2201.7	2190.6	2201.7	2199.5
5°	2197.3	2195.0	2184.0	2197.3	2197.3
7.5°	2181.8	2181.8	2170.7	2186.2	2188.4
10°	2159.6	2159.6	2153.0	2170.7	2170.7
12.5°	2133.0	2133.0	2133.0	2150.7	2153.0
15°	2099.8	2102.0	2104.2	2126.4	2130.8
17.5°	2059.9	2064.4	2071.0	2097.6	2102.0
20°	2017.8	2022.3	2033.3	2064.4	2071.0
22.5°	1964.7	1975.8	1991.3	2026.7	2033.3
25°	1916.0	1924.8	1947.0	1984.6	1995.7
27.5°	1856.2	1869.4	1898.2	1938.1	1953.6
30°	1796.3	1809.6	1845.1	1891.6	1904.9
32.5°	1732.1	1752.0	1789.7	1838.4	1853.9
35°	1665.7	1683.4	1727.7	1785.3	1803.0
37.5°	1592.6	1616.9	1665.7	1727.7	1749.8
40°	1521.7	1548.3	1603.6	1670.1	1696.7
42.5°	1450.8	1477.4	1539.4	1614.7	1641.3
45°	1371.1	1399.9	1470.7	1550.5	1579.3
47.5°	1291.3	1326.8	1404.3	1488.5	1519.5
50°	1209.4	1249.2	1333.4	1422.0	1457.5
52.5°	1136.3	1173.9	1262.5	1357.8	1391.0
55°	1052.1	1094.2	1191.7	1289.1	1326.8
57.5°	965.7	1012.2	1116.3	1222.7	1260.3
60°	881.6	932.5	1047.7	1154.0	1196.1
62.5°	799.6	850.6	970.2	1080.9	1123.0
65°	711.0	770.8	894.9	1007.8	1047.7
67.5°	626.8	691.1	821.8	932.5	972.4
70°	544.9	606.9	746.4	855.0	894.9
72.5°	456.3	527.2	666.7	779.7	821.8
75°	367.7	451.9	589.2	699.9	739.8
77.5°	285.7	372.1	509.4	600.3	620.2
80°	210.4	299.0	418.6	482.9	507.2
82.5°	135.1	223.7	319.0	365.5	385.4
85°	75.3	148.4	208.2	234.8	243.6
87.5°	31.0	64.2	84.2	95.2	95.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)