

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: P312785

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-CP250-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: P312785
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-24HE-UNV-L83050-CP250-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (168) 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: 1925.0 lumens
Efficiency: N/A
Efficacy: 101.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

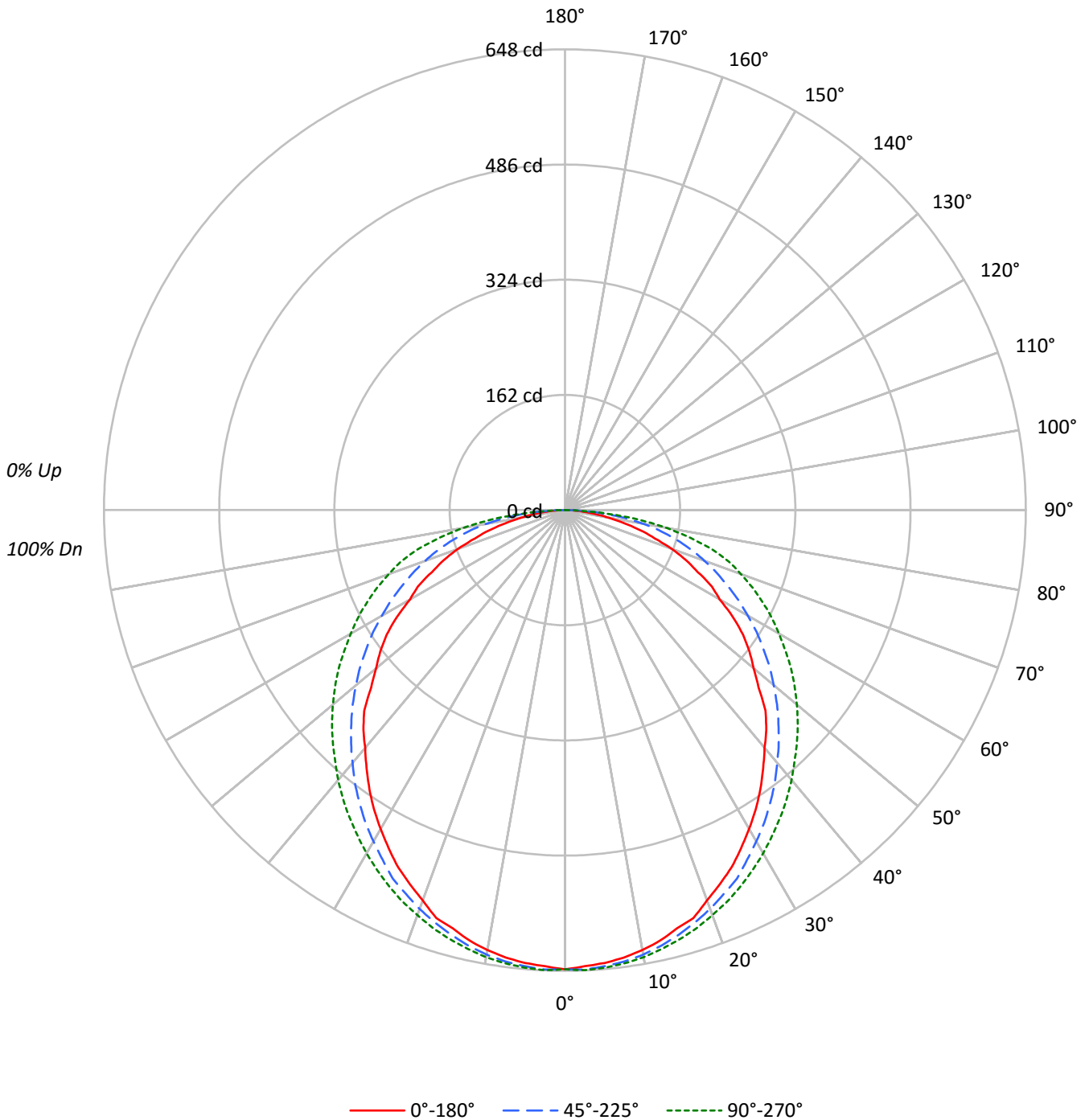
Input Watts (W): 18.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P312785

CATALOG NUMBER: 22FCZ2-24HE-UNV-L83050-CP250-W2A-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P312785

CATALOG NUMBER: 22FC22-24HE-UNV-L83050-CP250-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	98	94	105	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1738	1738	1738
5°	1727	1740	1745
10°	1717	1735	1745
15°	1697	1722	1740
20°	1673	1710	1736
25°	1647	1699	1734
30°	1609	1672	1732
35°	1574	1652	1734
40°	1534	1631	1741
45°	1518	1616	1757
50°	1450	1605	1782
55°	1435	1599	1820
60°	1354	1597	1869
65°	1314	1607	1954
70°	1261	1645	2073
75°	1150	1696	2232
80°	986	1756	2256
85°	797	1680	1936



TEST NUMBER: P312785

CATALOG NUMBER: 22FCZ2-24HE-UNV-L83050-CP250-W2A-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.1	3.2
10°-20°	174.3	9.1
20°-30°	262.4	13.6
30°-40°	314.9	16.4
40°-50°	329.2	17.1
50°-60°	306.7	15.9
60°-70°	251.6	13.1
70°-80°	169.5	8.8
80°-90°	55.2	2.9
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°	497.8	25.9
0°-40°	812.8	42.2
0°-60°	1448.7	75.3
0°-90°	1925.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1925.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	646	646	646	646	646	
5°	639	641	644	645	646	61
15°	609	613	618	624	625	172
25°	555	558	572	580	584	255
35°	479	486	503	521	528	300
45°	399	402	425	450	462	305
55°	306	311	341	373	388	271
65°	206	216	252	289	307	205
75°	111	122	163	200	215	116
85°	26	37	54	64	63	31
90°	0	0	0	0	0	



TEST NUMBER: P312785

CATALOG NUMBER: 22FCZ2-24HE-UNV-L83050-CP250-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	645.9	645.9	645.9	645.9	645.9
2.5°	642.2	644.0	646.8	647.7	647.7
5°	639.4	641.2	644.0	644.9	645.9
7.5°	634.8	636.6	640.3	642.2	643.1
10°	628.3	630.2	634.8	637.6	638.5
12.5°	620.1	621.9	627.4	631.1	632.0
15°	609.0	612.7	618.2	623.7	624.7
17.5°	601.6	600.7	608.1	614.5	616.4
20°	584.1	588.7	597.0	604.4	606.2
22.5°	569.4	573.1	584.1	592.4	596.1
25°	554.6	558.3	572.1	580.4	584.1
27.5°	536.2	541.7	554.6	566.6	571.2
30°	517.8	523.3	538.1	551.9	557.4
32.5°	499.4	505.8	521.5	536.2	542.7
35°	479.1	485.5	503.0	520.6	527.9
37.5°	457.9	466.2	484.6	504.0	512.3
40°	436.7	445.0	464.4	486.5	495.7
42.5°	419.2	422.9	445.0	469.0	478.2
45°	398.9	401.7	424.7	450.5	461.6
47.5°	369.5	379.6	404.5	433.0	444.1
50°	346.4	357.5	383.3	413.7	425.7
52.5°	327.1	334.4	363.0	393.4	407.2
55°	305.9	311.4	340.9	373.1	387.9
57.5°	280.1	290.2	319.7	352.9	367.6
60°	251.5	264.4	296.7	332.6	347.3
62.5°	233.1	240.5	275.5	311.4	328.0
65°	206.4	215.6	252.4	289.3	306.8
67.5°	184.3	193.5	231.3	268.1	285.6
70°	160.3	169.5	209.1	246.0	263.5
72.5°	132.7	145.6	187.0	223.9	242.3
75°	110.6	122.5	163.1	199.9	214.7
77.5°	85.7	101.3	139.1	169.5	180.6
80°	63.6	79.2	113.3	135.4	145.6
82.5°	43.3	59.0	84.8	101.3	106.9
85°	25.8	36.9	54.4	63.6	62.7
87.5°	12.0	15.7	22.1	22.1	21.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)