

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: P312890

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-S-CA08-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: P312890
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-20HE-UNV-L83050-S-CA08-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC 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: 1939.0 lumens
Efficiency: N/A
Efficacy: 116.1 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

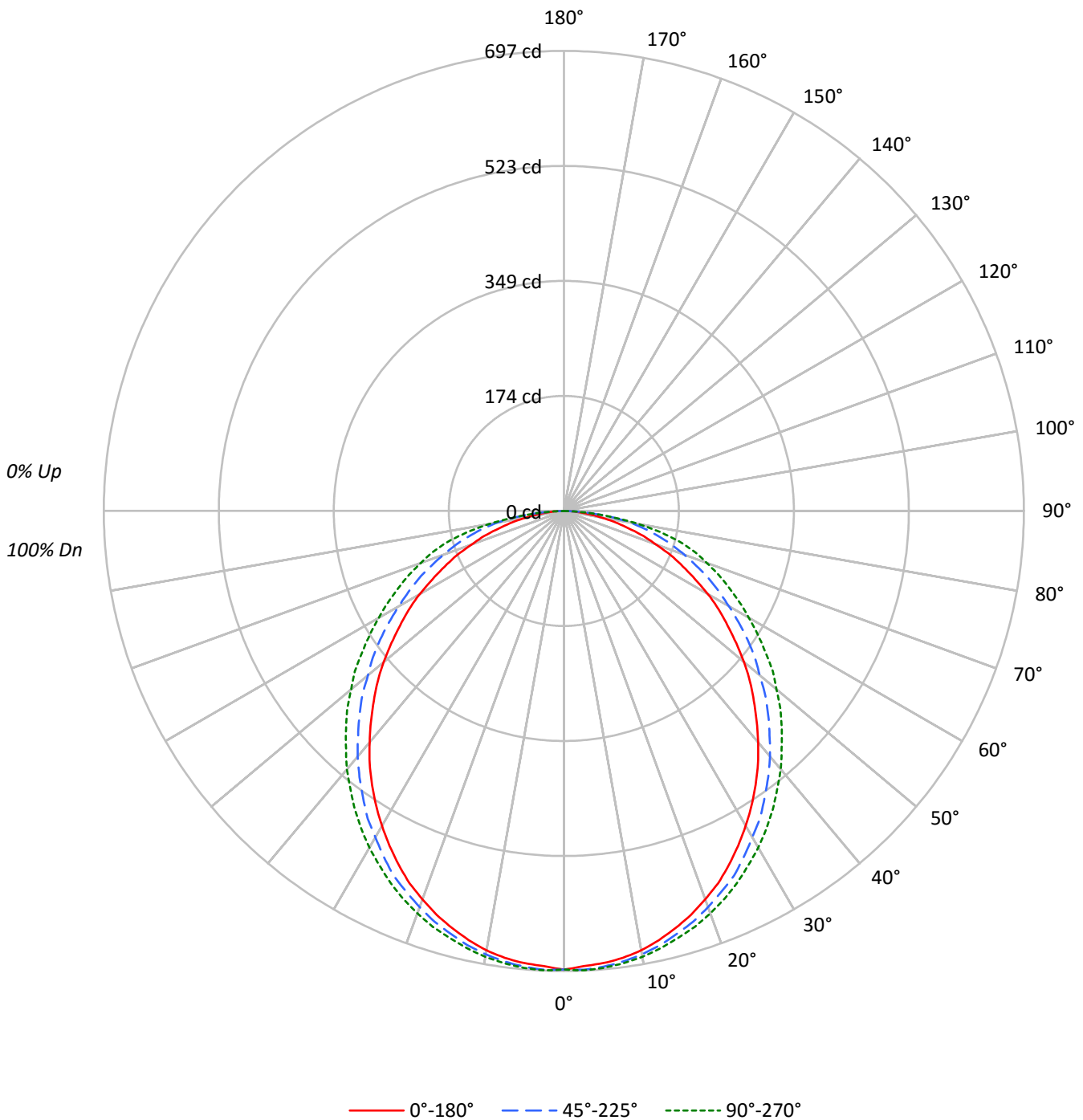
Input Watts (W): 16.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P312890

CATALOG NUMBER: 22FCZ2-20HE-UNV-L83050-S-CA08-W2A-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P312890

CATALOG NUMBER: 22FCZ2-20HE-UNV-L83050-S-CA08-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	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1870	1870	1870
5°	1857	1872	1877
10°	1847	1864	1874
15°	1822	1847	1865
20°	1793	1829	1858
25°	1757	1811	1845
30°	1712	1774	1830
35°	1664	1742	1813
40°	1608	1707	1796
45°	1549	1666	1776
50°	1492	1621	1761
55°	1422	1592	1749
60°	1358	1553	1743
65°	1267	1544	1762
70°	1168	1530	1815
75°	1053	1552	1910
80°	911	1598	1795
85°	753	1340	1340



TEST NUMBER: P312890

CATALOG NUMBER: 22FCZ2-20HE-UNV-L83050-S-CA08-W2A-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.7	3.4
10°-20°	187.0	9.6
20°-30°	279.8	14.4
30°-40°	331.3	17.1
40°-50°	337.7	17.4
50°-60°	302.6	15.6
60°-70°	236.9	12.2
70°-80°	152.8	7.9
80°-90°	45.1	2.3
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°	532.5	27.5
0°-40°	863.8	44.5
0°-60°	1504.1	77.6
0°-90°	1939.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1939.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	695	695	695	695	695	
5°	688	689	693	694	695	65
15°	654	658	663	669	670	184
25°	592	597	610	618	622	272
35°	507	513	530	546	552	317
45°	407	416	438	460	467	314
55°	303	313	339	363	373	272
65°	199	211	242	266	277	198
75°	101	117	149	175	184	109
85°	24	34	43	43	43	29
90°	0	0	0	0	0	



TEST NUMBER: P312890

CATALOG NUMBER: 22FCZ2-20HE-UNV-L83050-S-CA08-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	694.8	694.8	694.8	694.8	694.8
2.5°	690.3	692.1	695.7	696.6	696.6
5°	687.6	689.4	693.0	693.9	694.8
7.5°	683.0	683.9	688.5	690.3	691.2
10°	675.8	677.6	682.1	684.9	685.8
12.5°	665.9	668.6	674.0	677.6	678.5
15°	654.1	657.7	663.1	668.6	669.5
17.5°	641.4	645.0	652.3	658.6	660.4
20°	626.0	630.6	638.7	646.0	648.7
22.5°	610.7	614.3	624.2	633.3	636.0
25°	591.7	597.1	609.8	617.9	621.5
27.5°	571.8	578.1	590.8	601.6	605.2
30°	551.0	557.3	570.9	584.4	589.0
32.5°	529.2	536.5	552.8	566.3	570.9
35°	506.6	513.0	530.2	546.4	551.9
37.5°	483.1	488.5	508.4	525.6	531.1
40°	457.8	465.0	485.8	505.7	511.2
42.5°	432.4	440.6	461.4	483.1	488.5
45°	407.1	416.2	437.9	460.5	466.8
47.5°	382.7	389.9	414.3	436.1	445.1
50°	356.4	363.7	387.2	411.6	420.7
52.5°	329.3	339.3	364.6	388.1	399.0
55°	303.1	313.0	339.3	362.8	372.7
57.5°	278.6	286.8	313.9	338.4	348.3
60°	252.4	259.6	288.6	314.8	323.9
62.5°	224.4	235.2	265.1	289.5	300.4
65°	199.0	210.8	242.5	266.0	276.8
67.5°	175.5	186.4	217.1	242.5	254.2
70°	148.4	162.8	194.5	219.8	230.7
72.5°	126.7	139.3	171.9	197.2	209.0
75°	101.3	116.7	149.3	174.6	183.7
77.5°	80.5	95.9	126.7	146.6	151.1
80°	58.8	74.2	103.1	113.1	115.8
82.5°	39.8	54.3	74.2	76.9	77.8
85°	24.4	33.5	43.4	43.4	43.4
87.5°	11.8	13.6	15.4	14.5	14.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)