

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: P308602

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-CA08-W2A-U-3500K**

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: P308602
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: 22FCZ2-20HE-UNV-L82765-CA08-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, RIBBED 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: 1901.0 lumens
Efficiency: N/A
Efficacy: 113.2 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

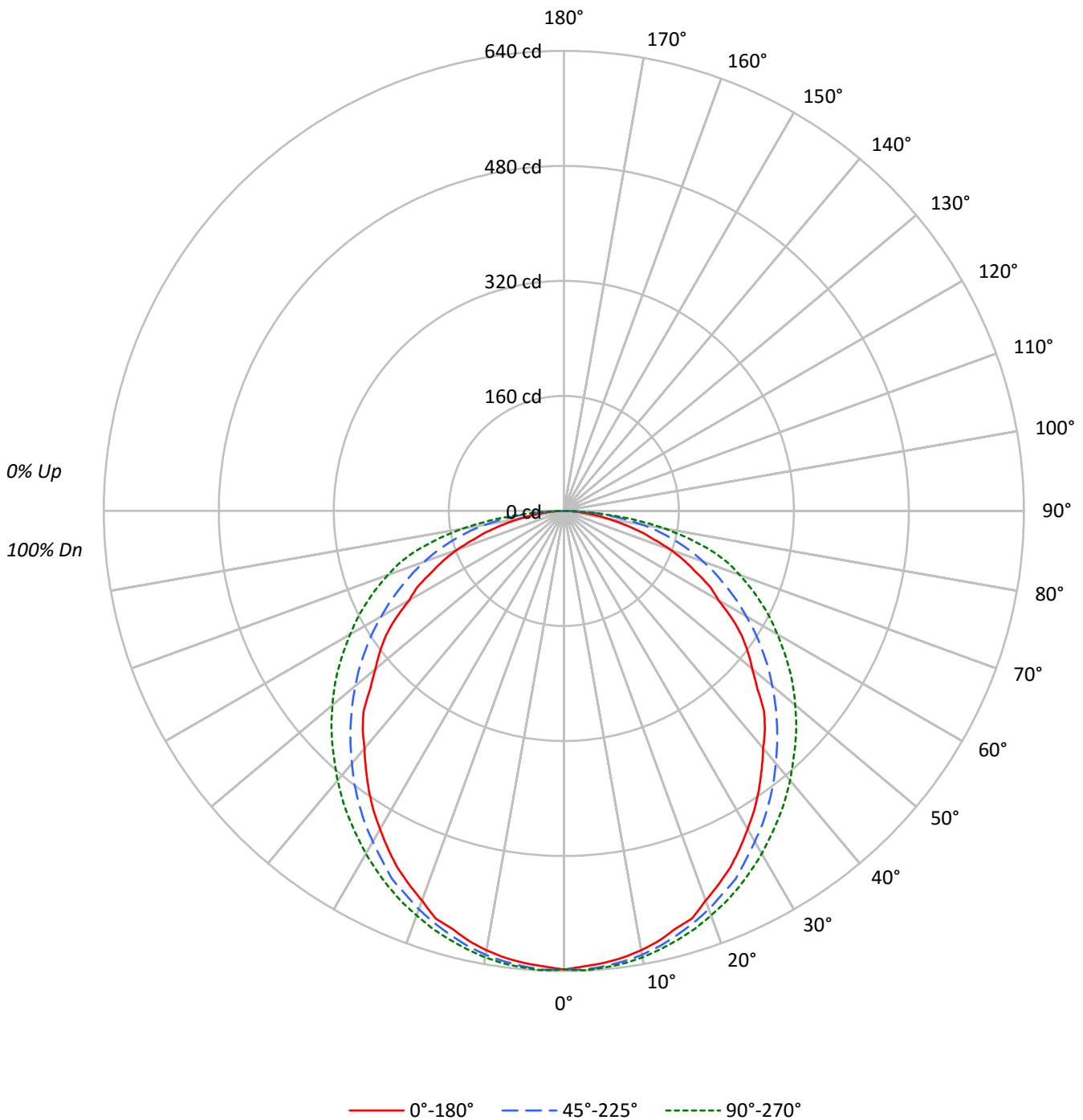
Input Watts (W): 16.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P308602

CATALOG NUMBER: 22FCZ2-20HE-UNV-L82765-CA08-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P308602

CATALOG NUMBER: 22FCZ2-20HE-UNV-L82765-CA08-W2A-U-3500K

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°	1716	1716	1716
5°	1706	1718	1723
10°	1696	1713	1723
15°	1675	1701	1719
20°	1652	1688	1714
25°	1626	1678	1713
30°	1589	1651	1711
35°	1554	1632	1713
40°	1515	1611	1720
45°	1499	1596	1735
50°	1432	1585	1760
55°	1417	1579	1797
60°	1337	1577	1846
65°	1298	1587	1929
70°	1245	1625	2047
75°	1135	1674	2204
80°	973	1734	2228
85°	787	1658	1911



TEST NUMBER: P308602

CATALOG NUMBER: 22FCZ2-20HE-UNV-L82765-CA08-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.4	3.2
10°-20°	172.2	9.1
20°-30°	259.1	13.6
30°-40°	311.0	16.4
40°-50°	325.0	17.1
50°-60°	302.9	15.9
60°-70°	248.5	13.1
70°-80°	167.4	8.8
80°-90°	54.5	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°	491.6	25.9
0°-40°	802.6	42.2
0°-60°	1430.6	75.3
0°-90°	1901.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1901.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	638	638	638	638	638	
5°	631	633	636	637	638	60
15°	601	605	610	616	617	170
25°	548	551	565	573	577	252
35°	473	480	497	514	521	296
45°	394	397	419	445	456	301
55°	302	308	337	368	383	268
65°	204	213	249	286	303	203
75°	109	121	161	197	212	115
85°	26	36	54	63	62	30
90°	0	0	0	0	0	



TEST NUMBER: P308602

CATALOG NUMBER: 22FCZ2-20HE-UNV-L82765-CA08-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	637.8	637.8	637.8	637.8	637.8
2.5°	634.2	636.0	638.7	639.6	639.6
5°	631.4	633.3	636.0	636.9	637.8
7.5°	626.9	628.7	632.3	634.2	635.1
10°	620.5	622.3	626.9	629.6	630.5
12.5°	612.3	614.1	619.6	623.2	624.2
15°	601.4	605.0	610.5	616.0	616.9
17.5°	594.1	593.2	600.5	606.9	608.7
20°	576.8	581.4	589.6	596.9	598.7
22.5°	562.3	565.9	576.8	585.0	588.7
25°	547.7	551.4	565.0	573.2	576.8
27.5°	529.5	535.0	547.7	559.6	564.1
30°	511.3	516.8	531.3	545.0	550.5
32.5°	493.1	499.5	515.0	529.5	535.9
35°	473.1	479.5	496.8	514.1	521.3
37.5°	452.2	460.4	478.6	497.7	505.9
40°	431.3	439.5	458.6	480.4	489.5
42.5°	414.0	417.6	439.5	463.1	472.2
45°	394.0	396.7	419.4	444.9	455.8
47.5°	364.8	374.9	399.4	427.6	438.5
50°	342.1	353.0	378.5	408.5	420.3
52.5°	323.0	330.3	358.5	388.5	402.2
55°	302.1	307.5	336.6	368.5	383.0
57.5°	276.6	286.6	315.7	348.5	363.0
60°	248.4	261.1	293.0	328.5	343.0
62.5°	230.2	237.5	272.0	307.5	323.9
65°	203.8	212.9	249.3	285.7	303.0
67.5°	182.0	191.1	228.4	264.8	282.1
70°	158.3	167.4	206.5	242.9	260.2
72.5°	131.0	143.8	184.7	221.1	239.3
75°	109.2	121.0	161.0	197.4	212.0
77.5°	84.6	100.1	137.4	167.4	178.3
80°	62.8	78.2	111.9	133.7	143.8
82.5°	42.8	58.2	83.7	100.1	105.5
85°	25.5	36.4	53.7	62.8	61.9
87.5°	11.8	15.5	21.8	21.8	20.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)