

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: P308635

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-CP187-W2A-U-6500K**

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: P308635
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-CP187-W2A-U-6500K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.187" 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: 1903.0 lumens
Efficiency: N/A
Efficacy: 109.4 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

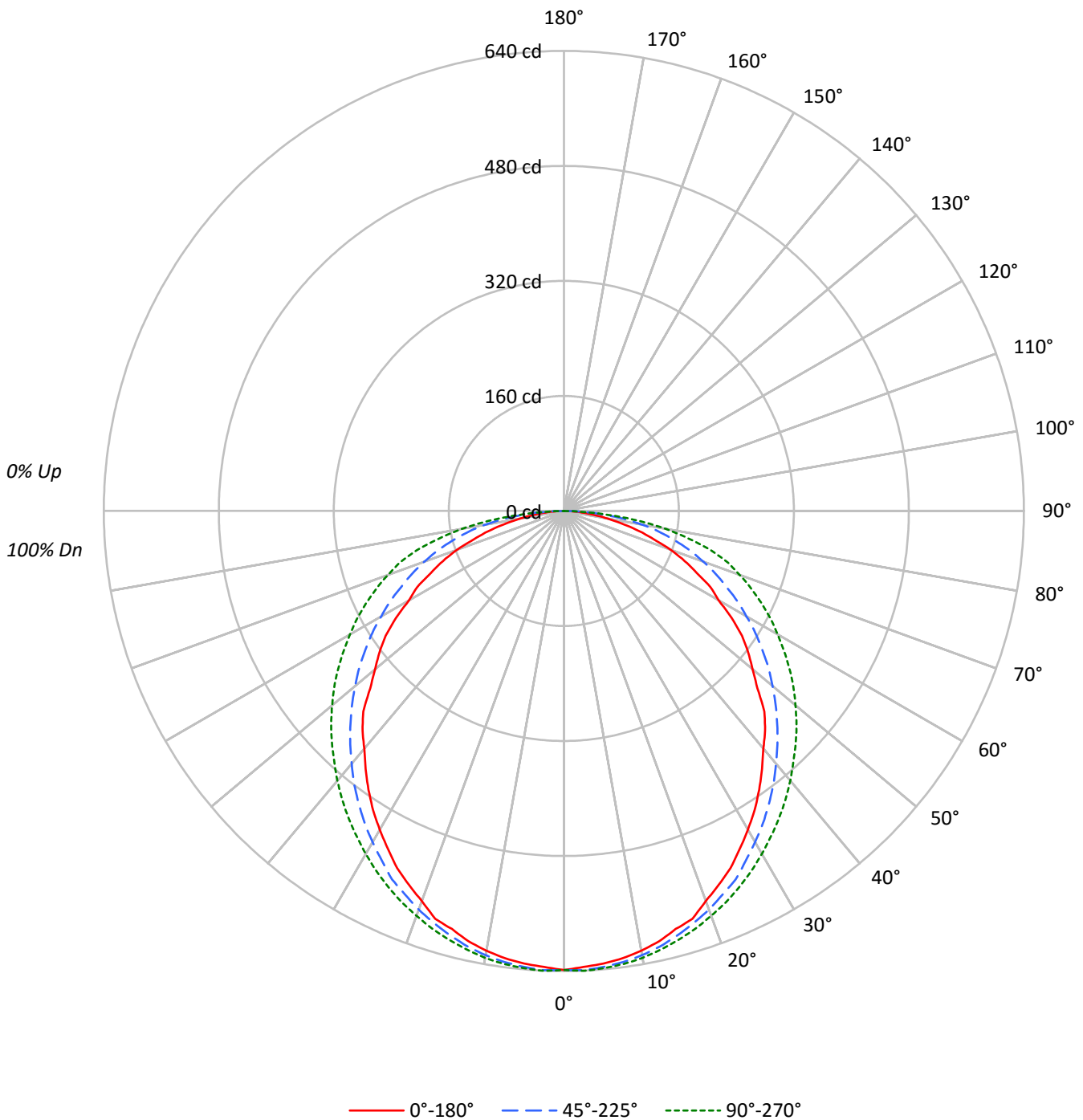
Input Watts (W): 17.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P308635

CATALOG NUMBER: 22FCZ2-20HE-UNV-L82765-CP187-W2A-U-6500K

Luminous Intensity Polar Plot





TEST NUMBER: P308635

CATALOG NUMBER: 22FCZ2-20HE-UNV-L82765-CP187-W2A-U-6500K

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°	1718	1718	1718
5°	1707	1720	1725
10°	1697	1715	1725
15°	1677	1702	1720
20°	1653	1690	1716
25°	1628	1679	1714
30°	1591	1653	1712
35°	1556	1634	1714
40°	1516	1612	1721
45°	1501	1598	1737
50°	1434	1586	1762
55°	1419	1581	1799
60°	1338	1579	1848
65°	1299	1589	1931
70°	1247	1627	2050
75°	1136	1676	2206
80°	973	1736	2230
85°	787	1658	1911



TEST NUMBER: P308635

CATALOG NUMBER: 22FCZ2-20HE-UNV-L82765-CP187-W2A-U-6500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.4	3.2
10°-20°	172.3	9.1
20°-30°	259.4	13.6
30°-40°	311.3	16.4
40°-50°	325.4	17.1
50°-60°	303.2	15.9
60°-70°	248.7	13.1
70°-80°	167.6	8.8
80°-90°	54.6	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°	492.1	25.9
0°-40°	803.5	42.2
0°-60°	1432.1	75.3
0°-90°	1903.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1903.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	638	638	638	638	638	
5°	632	634	637	638	638	60
15°	602	606	611	617	618	170
25°	548	552	566	574	577	252
35°	474	480	497	515	522	296
45°	394	397	420	445	456	301
55°	302	308	337	369	383	268
65°	204	213	250	286	303	203
75°	109	121	161	198	212	115
85°	26	36	54	63	62	30
90°	0	0	0	0	0	



TEST NUMBER: P308635

CATALOG NUMBER: 22FCZ2-20HE-UNV-L82765-CP187-W2A-U-6500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	638.5	638.5	638.5	638.5	638.5
2.5°	634.8	636.7	639.4	640.3	640.3
5°	632.1	633.9	636.7	637.6	638.5
7.5°	627.5	629.4	633.0	634.8	635.7
10°	621.2	623.0	627.5	630.3	631.2
12.5°	613.0	614.8	620.3	623.9	624.8
15°	602.0	605.7	611.1	616.6	617.5
17.5°	594.8	593.8	601.1	607.5	609.3
20°	577.4	582.0	590.2	597.5	599.3
22.5°	562.9	566.5	577.4	585.6	589.3
25°	548.3	551.9	565.6	573.8	577.4
27.5°	530.1	535.6	548.3	560.1	564.7
30°	511.9	517.3	531.9	545.6	551.0
32.5°	493.7	500.0	515.5	530.1	536.5
35°	473.6	480.0	497.3	514.6	521.9
37.5°	452.7	460.9	479.1	498.2	506.4
40°	431.7	439.9	459.0	480.9	490.0
42.5°	414.4	418.1	439.9	463.6	472.7
45°	394.4	397.1	419.9	445.4	456.3
47.5°	365.2	375.3	399.8	428.1	439.0
50°	342.5	353.4	378.9	409.0	420.8
52.5°	323.3	330.6	358.9	388.9	402.6
55°	302.4	307.9	337.0	368.9	383.4
57.5°	276.9	286.9	316.0	348.8	363.4
60°	248.6	261.4	293.3	328.8	343.4
62.5°	230.4	237.7	272.3	307.9	324.2
65°	204.0	213.1	249.6	286.0	303.3
67.5°	182.2	191.3	228.6	265.0	282.3
70°	158.5	167.6	206.8	243.2	260.5
72.5°	131.2	143.9	184.9	221.3	239.5
75°	109.3	121.1	161.2	197.6	212.2
77.5°	84.7	100.2	137.5	167.6	178.5
80°	62.8	78.3	112.0	133.9	143.9
82.5°	42.8	58.3	83.8	100.2	105.7
85°	25.5	36.4	53.7	62.8	61.9
87.5°	11.8	15.5	21.9	21.9	20.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)