

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: P308903

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-S-CP187-W2A-U-5500K**

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: P308903
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-L82765-S-CP187-W2A-U-5500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH 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: 1996.0 lumens
Efficiency: N/A
Efficacy: 116.0 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

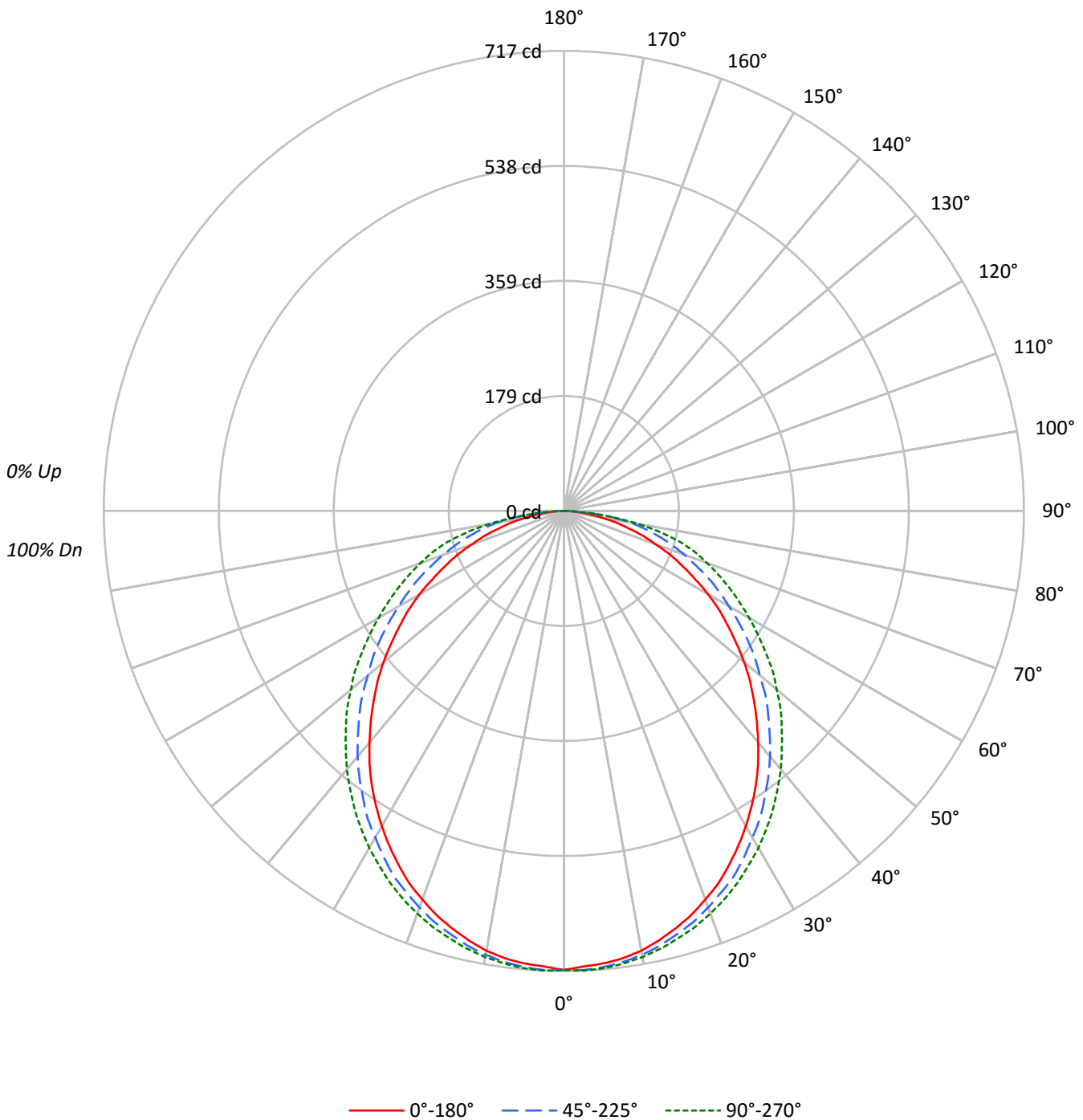
Input Watts (W): 17.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P308903

CATALOG NUMBER: 22FCZ2-20HE-UNV-L82765-S-CP187-W2A-U-5500K

Luminous Intensity Polar Plot





TEST NUMBER: P308903

CATALOG NUMBER: 22FC22-20HE-UNV-L82765-S-CP187-W2A-U-5500K

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°	1925	1925	1925
5°	1912	1927	1932
10°	1901	1919	1929
15°	1876	1902	1920
20°	1846	1883	1912
25°	1809	1864	1900
30°	1762	1826	1884
35°	1713	1793	1866
40°	1655	1757	1848
45°	1595	1715	1829
50°	1536	1669	1813
55°	1464	1638	1800
60°	1398	1599	1794
65°	1305	1589	1815
70°	1201	1575	1869
75°	1084	1598	1966
80°	938	1646	1847
85°	775	1380	1380



TEST NUMBER: P308903

CATALOG NUMBER: 22FCZ2-20HE-UNV-L82765-S-CP187-W2A-U-5500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.6	3.4
10°-20°	192.5	9.6
20°-30°	288.0	14.4
30°-40°	341.1	17.1
40°-50°	347.6	17.4
50°-60°	311.5	15.6
60°-70°	243.9	12.2
70°-80°	157.3	7.9
80°-90°	46.5	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°	548.1	27.5
0°-40°	889.2	44.5
0°-60°	1548.3	77.6
0°-90°	1996.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1996.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	715	715	715	715	715	
5°	708	710	713	714	715	67
15°	673	677	683	688	689	190
25°	609	615	628	636	640	280
35°	522	528	546	562	568	326
45°	419	428	451	474	480	324
55°	312	322	349	373	384	280
65°	205	217	250	274	285	204
75°	104	120	154	180	189	112
85°	25	34	45	45	45	30
90°	0	0	0	0	0	



TEST NUMBER: P308903

CATALOG NUMBER: 22FC22-20HE-UNV-L82765-S-CP187-W2A-U-5500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	715.2	715.2	715.2	715.2	715.2
2.5°	710.6	712.4	716.2	717.1	717.1
5°	707.8	709.6	713.4	714.3	715.2
7.5°	703.1	704.1	708.7	710.6	711.5
10°	695.7	697.5	702.2	705.0	705.9
12.5°	685.4	688.2	693.8	697.5	698.5
15°	673.3	677.0	682.6	688.2	689.2
17.5°	660.3	664.0	671.5	678.0	679.8
20°	644.5	649.1	657.5	664.9	667.7
22.5°	628.6	632.3	642.6	651.9	654.7
25°	609.1	614.6	627.7	636.1	639.8
27.5°	588.6	595.1	608.1	619.3	623.0
30°	567.2	573.7	587.6	601.6	606.3
32.5°	544.8	552.3	569.0	583.0	587.6
35°	521.5	528.0	545.7	562.5	568.1
37.5°	497.3	502.9	523.4	541.1	546.7
40°	471.2	478.7	500.1	520.6	526.2
42.5°	445.2	453.5	475.0	497.3	502.9
45°	419.1	428.4	450.7	474.0	480.5
47.5°	393.9	401.4	426.5	448.9	458.2
50°	366.9	374.4	398.6	423.7	433.0
52.5°	339.0	349.2	375.3	399.5	410.7
55°	312.0	322.2	349.2	373.4	383.7
57.5°	286.8	295.2	323.2	348.3	358.5
60°	259.8	267.3	297.1	324.1	333.4
62.5°	231.0	242.1	272.9	298.0	309.2
65°	204.9	217.0	249.6	273.8	285.0
67.5°	180.7	191.8	223.5	249.6	261.7
70°	152.7	167.6	200.2	226.3	237.5
72.5°	130.4	143.4	176.9	203.0	215.1
75°	104.3	120.1	153.7	179.7	189.1
77.5°	82.9	98.7	130.4	150.9	155.5
80°	60.5	76.4	106.2	116.4	119.2
82.5°	41.0	55.9	76.4	79.2	80.1
85°	25.1	34.5	44.7	44.7	44.7
87.5°	12.1	14.0	15.8	14.9	14.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)