

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: P308632

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-CP187-W2A-U-5000K**

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: P308632
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-5000K
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: 1874.0 lumens
Efficiency: N/A
Efficacy: 109.6 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

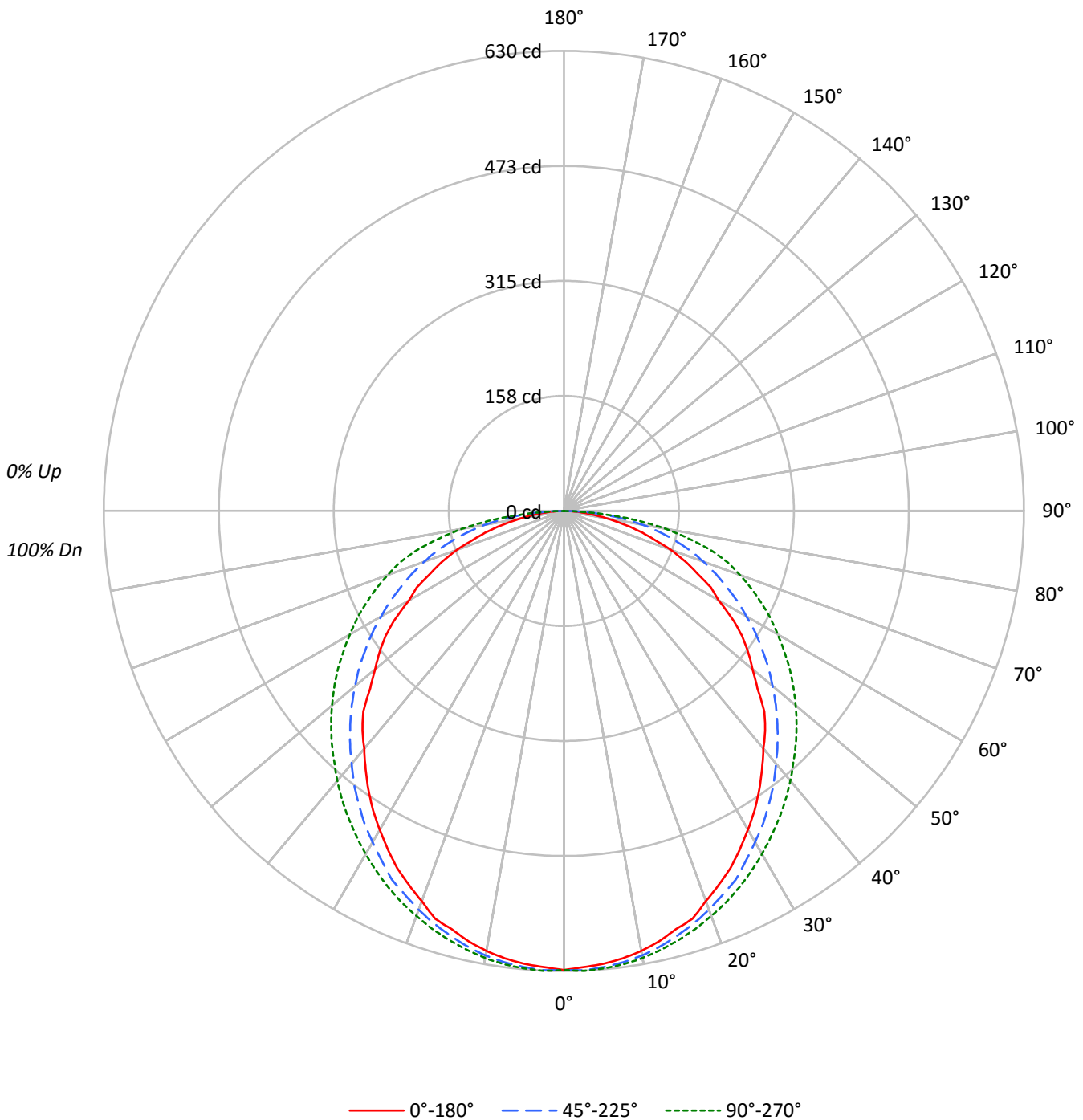
Input Watts (W): 17.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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°	1692	1692	1692
5°	1682	1693	1698
10°	1671	1689	1699
15°	1652	1677	1694
20°	1628	1664	1690
25°	1603	1654	1688
30°	1566	1628	1686
35°	1532	1609	1688
40°	1493	1588	1695
45°	1478	1574	1710
50°	1412	1562	1735
55°	1397	1557	1772
60°	1318	1554	1820
65°	1279	1565	1902
70°	1228	1602	2018
75°	1119	1651	2173
80°	959	1709	2196
85°	775	1633	1883



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.5	3.2
10°-20°	169.7	9.1
20°-30°	255.4	13.6
30°-40°	306.6	16.4
40°-50°	320.4	17.1
50°-60°	298.6	15.9
60°-70°	244.9	13.1
70°-80°	165.0	8.8
80°-90°	53.7	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°	484.7	25.9
0°-40°	791.2	42.2
0°-60°	1410.3	75.3
0°-90°	1874.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1874.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	629	629	629	629	629	
5°	622	624	627	628	629	59
15°	593	596	602	607	608	168
25°	540	544	557	565	569	248
35°	466	473	490	507	514	292
45°	388	391	414	439	449	297
55°	298	303	332	363	378	264
65°	201	210	246	282	299	200
75°	108	119	159	195	209	113
85°	25	36	53	62	61	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	628.7	628.7	628.7	628.7	628.7
2.5°	625.2	626.9	629.6	630.5	630.5
5°	622.5	624.3	626.9	627.8	628.7
7.5°	618.0	619.8	623.4	625.2	626.1
10°	611.7	613.5	618.0	620.7	621.6
12.5°	603.6	605.4	610.8	614.4	615.3
15°	592.9	596.5	601.8	607.2	608.1
17.5°	585.7	584.8	592.0	598.2	600.0
20°	568.6	573.1	581.2	588.4	590.2
22.5°	554.3	557.9	568.6	576.7	580.3
25°	539.9	543.5	557.0	565.1	568.6
27.5°	522.0	527.4	539.9	551.6	556.1
30°	504.1	509.5	523.8	537.3	542.6
32.5°	486.1	492.4	507.7	522.0	528.3
35°	466.4	472.7	489.7	506.8	513.9
37.5°	445.8	453.8	471.8	490.6	498.7
40°	425.1	433.2	452.0	473.6	482.5
42.5°	408.1	411.7	433.2	456.5	465.5
45°	388.4	391.1	413.5	438.6	449.4
47.5°	359.7	369.5	393.7	421.6	432.3
50°	337.2	348.0	373.1	402.7	414.4
52.5°	318.4	325.6	353.4	383.0	396.4
55°	297.8	303.2	331.9	363.3	377.6
57.5°	272.7	282.5	311.2	343.5	357.9
60°	244.9	257.4	288.8	323.8	338.1
62.5°	226.9	234.1	268.2	303.2	319.3
65°	200.9	209.9	245.8	281.6	298.7
67.5°	179.4	188.4	225.1	261.0	278.0
70°	156.1	165.0	203.6	239.5	256.5
72.5°	129.2	141.7	182.1	218.0	235.9
75°	107.6	119.3	158.8	194.6	209.0
77.5°	83.4	98.7	135.4	165.0	175.8
80°	61.9	77.1	110.3	131.8	141.7
82.5°	42.2	57.4	82.5	98.7	104.0
85°	25.1	35.9	52.9	61.9	61.0
87.5°	11.7	15.2	21.5	21.5	20.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)