

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: P308613

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-CA125-W2A-U-4500K**

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: P308613
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-CA125-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.125" 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: 1969.0 lumens
Efficiency: N/A
Efficacy: 115.8 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

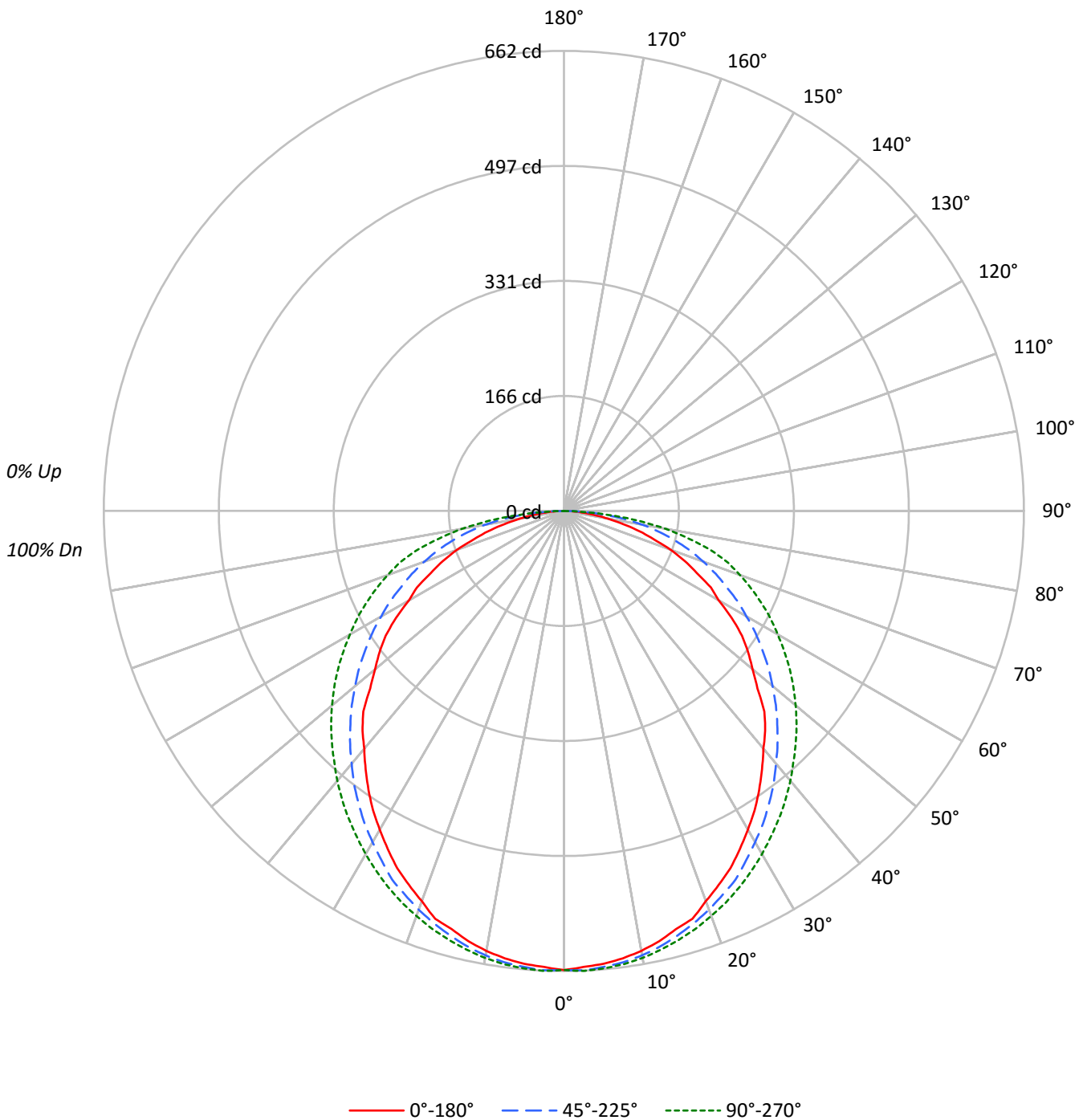
Input Watts (W): 17
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1778	1778	1778
5°	1767	1779	1784
10°	1756	1774	1785
15°	1735	1762	1780
20°	1711	1749	1776
25°	1684	1738	1774
30°	1646	1710	1771
35°	1610	1690	1774
40°	1569	1669	1781
45°	1553	1653	1797
50°	1483	1641	1823
55°	1468	1636	1861
60°	1385	1633	1912
65°	1344	1644	1998
70°	1290	1683	2120
75°	1176	1734	2283
80°	1007	1796	2307
85°	815	1717	1979



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.5	3.2
10°-20°	178.3	9.1
20°-30°	268.4	13.6
30°-40°	322.1	16.4
40°-50°	336.7	17.1
50°-60°	313.8	15.9
60°-70°	257.3	13.1
70°-80°	173.4	8.8
80°-90°	56.5	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°	509.2	25.9
0°-40°	831.3	42.2
0°-60°	1481.8	75.3
0°-90°	1969.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1969.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	661	661	661	661	661	
5°	654	656	659	660	661	62
15°	623	627	632	638	639	176
25°	567	571	585	594	598	261
35°	490	497	514	532	540	306
45°	408	411	434	461	472	312
55°	313	318	349	382	397	277
65°	211	220	258	296	314	210
75°	113	125	167	204	220	119
85°	26	38	56	65	64	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	660.6	660.6	660.6	660.6	660.6
2.5°	656.8	658.7	661.6	662.5	662.5
5°	654.0	655.9	658.7	659.7	660.6
7.5°	649.3	651.2	655.0	656.8	657.8
10°	642.7	644.6	649.3	652.1	653.1
12.5°	634.2	636.1	641.8	645.5	646.5
15°	622.9	626.7	632.3	638.0	638.9
17.5°	615.4	614.4	622.0	628.6	630.5
20°	597.5	602.2	610.7	618.2	620.1
22.5°	582.4	586.2	597.5	606.0	609.7
25°	567.3	571.1	585.2	593.7	597.5
27.5°	548.5	554.1	567.3	579.6	584.3
30°	529.6	535.3	550.4	564.5	570.1
32.5°	510.8	517.4	533.4	548.5	555.1
35°	490.0	496.6	514.5	532.5	540.0
37.5°	468.4	476.8	495.7	515.5	524.0
40°	446.7	455.2	475.0	497.6	507.0
42.5°	428.8	432.6	455.2	479.7	489.1
45°	408.1	410.9	434.4	460.8	472.1
47.5°	377.9	388.3	413.7	442.9	454.2
50°	354.3	365.6	392.0	423.1	435.4
52.5°	334.5	342.1	371.3	402.4	416.5
55°	312.9	318.5	348.7	381.7	396.7
57.5°	286.5	296.9	327.0	360.9	376.0
60°	257.3	270.5	303.4	340.2	355.3
62.5°	238.4	246.0	281.8	318.5	335.5
65°	211.1	220.5	258.2	295.9	313.8
67.5°	188.5	197.9	236.5	274.2	292.1
70°	164.0	173.4	213.9	251.6	269.5
72.5°	135.7	148.9	191.3	229.0	247.8
75°	113.1	125.3	166.8	204.5	219.6
77.5°	87.6	103.7	142.3	173.4	184.7
80°	65.0	81.0	115.9	138.5	148.9
82.5°	44.3	60.3	86.7	103.7	109.3
85°	26.4	37.7	55.6	65.0	64.1
87.5°	12.3	16.0	22.6	22.6	21.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)