

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: P308895

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-S-CP125-W2A-U-5700K**

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: P308895
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-CP125-W2A-U-5700K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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: 2090.0 lumens
Efficiency: N/A
Efficacy: 121.5 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

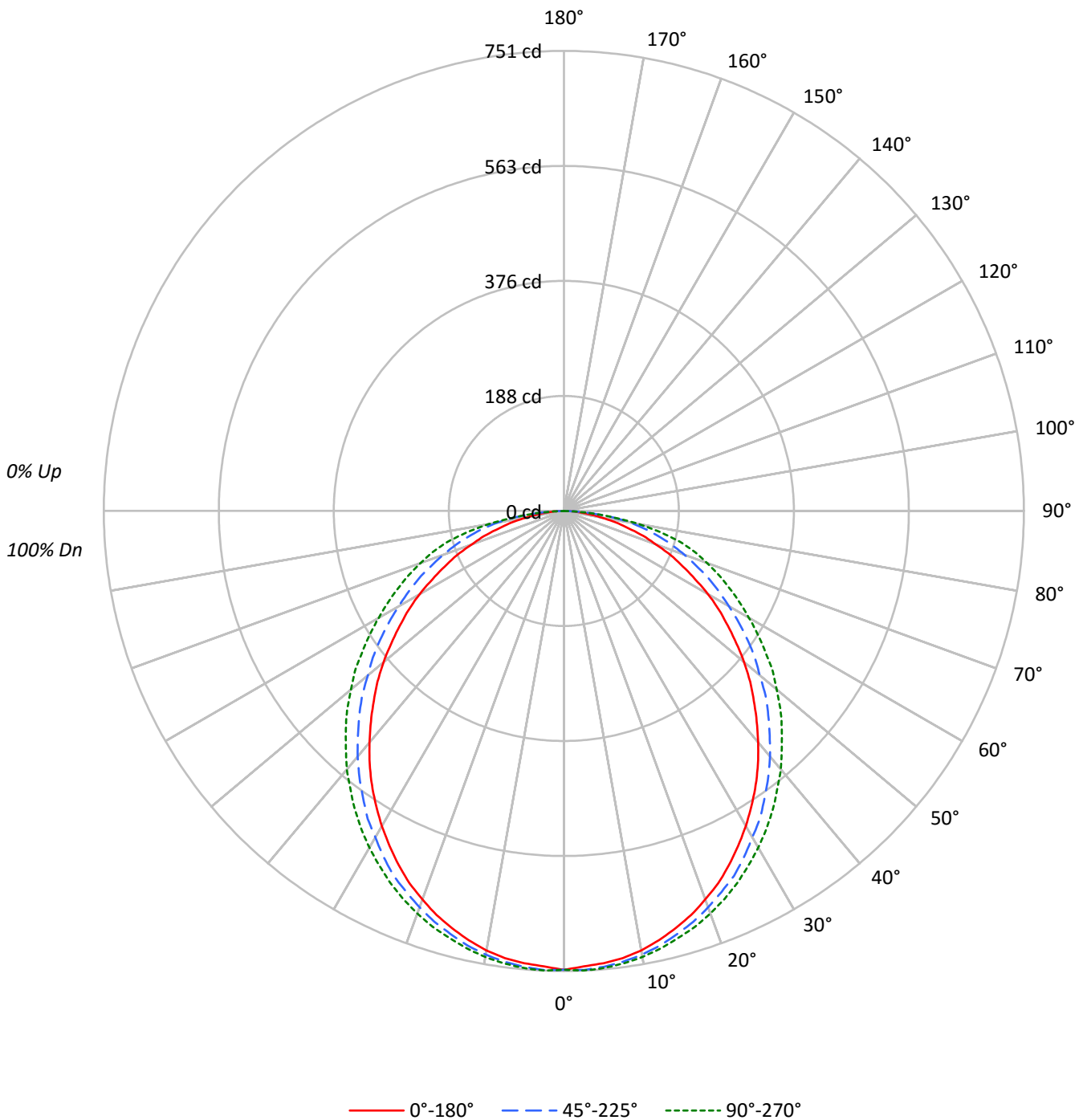
Input Watts (W): 17.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2015	2015	2015
5°	2002	2018	2023
10°	1990	2009	2020
15°	1964	1991	2010
20°	1932	1972	2002
25°	1893	1951	1989
30°	1845	1912	1972
35°	1794	1877	1954
40°	1733	1840	1936
45°	1670	1796	1915
50°	1608	1747	1898
55°	1533	1716	1885
60°	1464	1674	1879
65°	1366	1664	1900
70°	1258	1650	1957
75°	1135	1673	2059
80°	982	1723	1934
85°	812	1445	1445



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.8	3.4
10°-20°	201.6	9.6
20°-30°	301.6	14.4
30°-40°	357.1	17.1
40°-50°	364.0	17.4
50°-60°	326.2	15.6
60°-70°	255.4	12.2
70°-80°	164.7	7.9
80°-90°	48.7	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°	573.9	27.5
0°-40°	931.1	44.5
0°-60°	1621.3	77.6
0°-90°	2090.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2090.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	749	749	749	749	749	
5°	741	743	747	748	749	70
15°	705	709	715	721	722	199
25°	638	644	657	666	670	294
35°	546	553	571	589	595	341
45°	439	449	472	496	503	339
55°	327	337	366	391	402	293
65°	214	227	261	287	298	213
75°	109	126	161	188	198	117
85°	26	36	47	47	47	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	748.9	748.9	748.9	748.9	748.9
2.5°	744.0	746.0	749.9	750.9	750.9
5°	741.1	743.1	747.0	747.9	748.9
7.5°	736.2	737.2	742.1	744.0	745.0
10°	728.4	730.4	735.3	738.2	739.2
12.5°	717.7	720.6	726.5	730.4	731.4
15°	705.0	708.9	714.8	720.6	721.6
17.5°	691.4	695.3	703.1	709.9	711.9
20°	674.8	679.7	688.5	696.3	699.2
22.5°	658.2	662.1	672.9	682.6	685.5
25°	637.7	643.6	657.2	666.0	669.9
27.5°	616.3	623.1	636.8	648.5	652.4
30°	593.9	600.7	615.3	629.9	634.8
32.5°	570.5	578.3	595.8	610.4	615.3
35°	546.1	552.9	571.4	589.0	594.8
37.5°	520.7	526.6	548.0	566.6	572.4
40°	493.4	501.2	523.7	545.1	551.0
42.5°	466.1	474.9	497.3	520.7	526.6
45°	438.8	448.6	472.0	496.3	503.2
47.5°	412.5	420.3	446.6	470.0	479.8
50°	384.2	392.0	417.4	443.7	453.4
52.5°	355.0	365.7	393.0	418.3	430.0
55°	326.7	337.4	365.7	391.0	401.8
57.5°	300.3	309.1	338.4	364.7	375.4
60°	272.1	279.9	311.1	339.4	349.1
62.5°	241.8	253.5	285.7	312.0	323.7
65°	214.5	227.2	261.3	286.7	298.4
67.5°	189.2	200.9	234.0	261.3	274.0
70°	159.9	175.5	209.7	237.0	248.7
72.5°	136.5	150.2	185.3	212.6	225.3
75°	109.2	125.8	160.9	188.2	198.0
77.5°	86.8	103.4	136.5	158.0	162.8
80°	63.4	80.0	111.2	121.9	124.8
82.5°	42.9	58.5	80.0	82.9	83.9
85°	26.3	36.1	46.8	46.8	46.8
87.5°	12.7	14.6	16.6	15.6	15.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)