

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: P308875

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-S-CA08-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: P308875
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-CA08-W2A-U-5000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.08" 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: 2113.0 lumens
Efficiency: N/A
Efficacy: 123.6 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

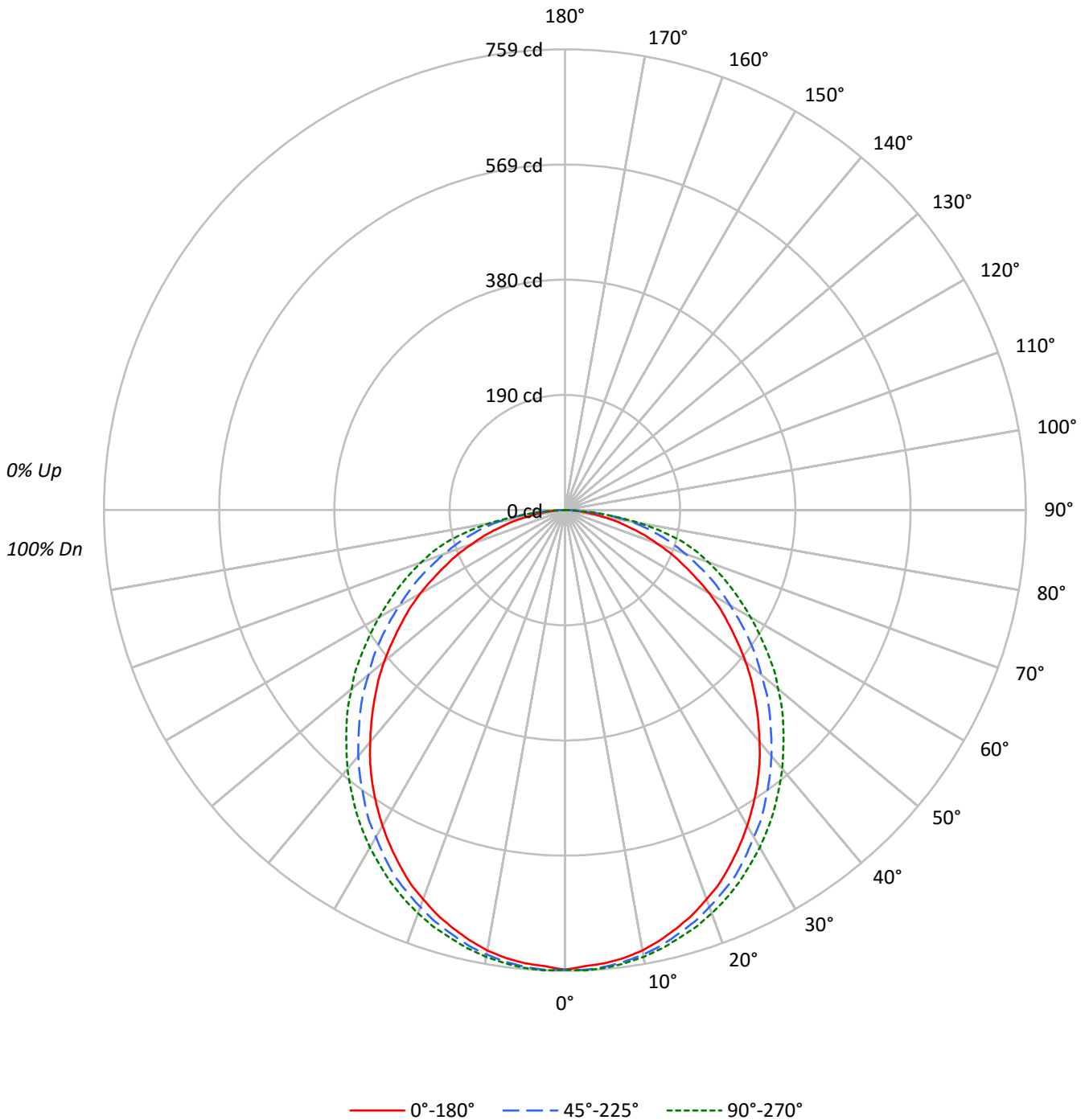
Input Watts (W): 17.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2038	2038	2038
5°	2024	2040	2045
10°	2012	2031	2042
15°	1986	2013	2032
20°	1954	1993	2024
25°	1915	1973	2011
30°	1866	1933	1994
35°	1814	1898	1976
40°	1753	1860	1957
45°	1688	1816	1936
50°	1626	1767	1919
55°	1550	1734	1906
60°	1481	1693	1899
65°	1381	1682	1921
70°	1272	1668	1978
75°	1148	1692	2080
80°	993	1742	1956
85°	821	1460	1460



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.6	3.4
10°-20°	203.8	9.6
20°-30°	304.9	14.4
30°-40°	361.1	17.1
40°-50°	368.0	17.4
50°-60°	329.8	15.6
60°-70°	258.2	12.2
70°-80°	166.5	7.9
80°-90°	49.2	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°	580.3	27.5
0°-40°	941.3	44.5
0°-60°	1639.1	77.6
0°-90°	2113.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2113.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	757	757	757	757	757	
5°	749	751	755	756	757	71
15°	713	717	723	729	730	201
25°	645	651	664	673	677	297
35°	552	559	578	596	601	345
45°	444	454	477	502	509	343
55°	330	341	370	395	406	296
65°	217	230	264	290	302	215
75°	110	127	163	190	200	118
85°	27	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°	757.2	757.2	757.2	757.2	757.2
2.5°	752.2	754.2	758.1	759.1	759.1
5°	749.3	751.2	755.2	756.2	757.2
7.5°	744.3	745.3	750.3	752.2	753.2
10°	736.5	738.4	743.4	746.3	747.3
12.5°	725.6	728.6	734.5	738.4	739.4
15°	712.8	716.7	722.6	728.6	729.5
17.5°	699.0	702.9	710.8	717.7	719.7
20°	682.2	687.2	696.0	703.9	706.9
22.5°	665.5	669.4	680.3	690.1	693.1
25°	644.8	650.7	664.5	673.4	677.3
27.5°	623.1	630.0	643.8	655.6	659.6
30°	600.4	607.3	622.1	636.9	641.8
32.5°	576.7	584.6	602.4	617.2	622.1
35°	552.1	559.0	577.7	595.5	601.4
37.5°	526.5	532.4	554.1	572.8	578.7
40°	498.9	506.7	529.4	551.1	557.0
42.5°	471.2	480.1	502.8	526.5	532.4
45°	443.6	453.5	477.2	501.8	508.7
47.5°	417.0	424.9	451.5	475.2	485.1
50°	388.4	396.3	422.0	448.6	458.4
52.5°	358.9	369.7	397.3	422.9	434.8
55°	330.3	341.1	369.7	395.3	406.2
57.5°	303.7	312.5	342.1	368.7	379.6
60°	275.1	282.9	314.5	343.1	352.9
62.5°	244.5	256.3	288.9	315.5	327.3
65°	216.9	229.7	264.2	289.8	301.7
67.5°	191.3	203.1	236.6	264.2	277.0
70°	161.7	177.5	212.0	239.6	251.4
72.5°	138.0	151.8	187.3	214.9	227.7
75°	110.4	127.2	162.7	190.3	200.1
77.5°	87.7	104.5	138.0	159.7	164.6
80°	64.1	80.8	112.4	123.2	126.2
82.5°	43.4	59.2	80.8	83.8	84.8
85°	26.6	36.5	47.3	47.3	47.3
87.5°	12.8	14.8	16.8	15.8	15.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)