

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: P308884

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-S-CA125-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: P308884
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-CA125-W2A-U-5000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH 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: 2105.0 lumens
Efficiency: N/A
Efficacy: 123.1 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

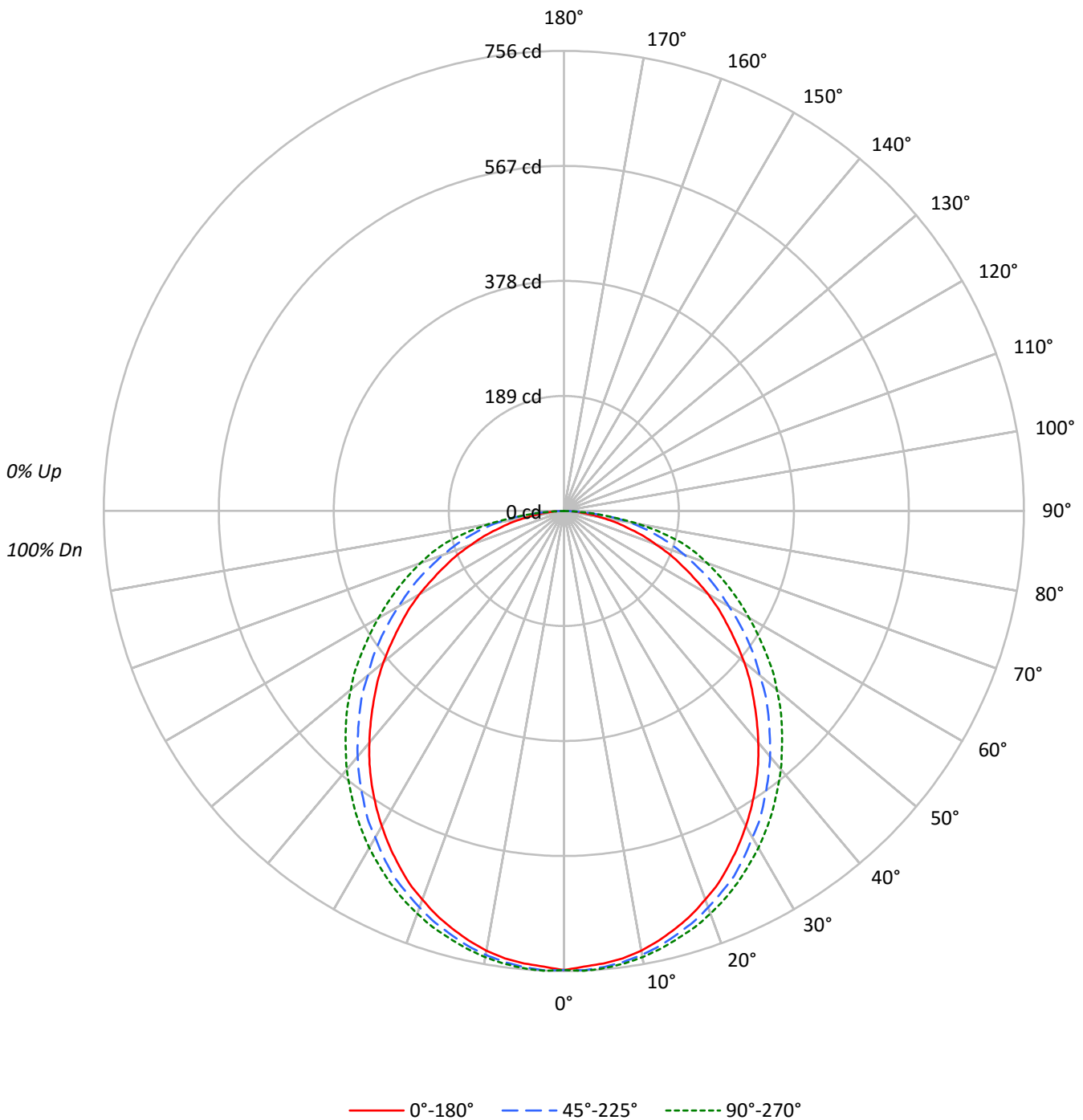
Input Watts (W): 17.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2030	2030	2030
5°	2016	2032	2038
10°	2005	2023	2034
15°	1978	2006	2025
20°	1946	1986	2017
25°	1907	1966	2003
30°	1858	1926	1987
35°	1807	1891	1968
40°	1746	1853	1949
45°	1682	1809	1929
50°	1620	1760	1912
55°	1544	1728	1898
60°	1475	1686	1892
65°	1376	1676	1913
70°	1268	1662	1970
75°	1144	1685	2073
80°	989	1736	1948
85°	818	1454	1454



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.3	3.4
10°-20°	203.0	9.6
20°-30°	303.7	14.4
30°-40°	359.7	17.1
40°-50°	366.6	17.4
50°-60°	328.5	15.6
60°-70°	257.2	12.2
70°-80°	165.9	7.9
80°-90°	49.0	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°	578.1	27.5
0°-40°	937.8	44.5
0°-60°	1632.9	77.6
0°-90°	2105.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2105.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	754	754	754	754	754	
5°	746	748	752	753	754	71
15°	710	714	720	726	727	200
25°	642	648	662	671	675	296
35°	550	557	576	593	599	344
45°	442	452	475	500	507	341
55°	329	340	368	394	405	295
65°	216	229	263	289	300	215
75°	110	127	162	190	199	118
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°	754.3	754.3	754.3	754.3	754.3
2.5°	749.4	751.3	755.3	756.3	756.3
5°	746.4	748.4	752.3	753.3	754.3
7.5°	741.5	742.5	747.4	749.4	750.4
10°	733.7	735.6	740.5	743.5	744.5
12.5°	722.9	725.8	731.7	735.6	736.6
15°	710.1	714.0	719.9	725.8	726.8
17.5°	696.3	700.3	708.1	715.0	717.0
20°	679.6	684.6	693.4	701.3	704.2
22.5°	662.9	666.9	677.7	687.5	690.4
25°	642.3	648.2	662.0	670.8	674.7
27.5°	620.7	627.6	641.3	653.1	657.1
30°	598.1	605.0	619.7	634.5	639.4
32.5°	574.6	582.4	600.1	614.8	619.7
35°	550.0	556.9	575.5	593.2	599.1
37.5°	524.5	530.4	552.0	570.6	576.5
40°	497.0	504.8	527.4	549.0	554.9
42.5°	469.5	478.3	500.9	524.5	530.4
45°	442.0	451.8	475.4	499.9	506.8
47.5°	415.4	423.3	449.8	473.4	483.2
50°	387.0	394.8	420.4	446.9	456.7
52.5°	357.5	368.3	395.8	421.3	433.1
55°	329.0	339.8	368.3	393.8	404.6
57.5°	302.5	311.3	340.8	367.3	378.1
60°	274.0	281.9	313.3	341.8	351.6
62.5°	243.6	255.4	287.8	314.3	326.1
65°	216.1	228.8	263.2	288.8	300.5
67.5°	190.5	202.3	235.7	263.2	276.0
70°	161.1	176.8	211.2	238.7	250.4
72.5°	137.5	151.3	186.6	214.1	226.9
75°	110.0	126.7	162.1	189.6	199.4
77.5°	87.4	104.1	137.5	159.1	164.0
80°	63.8	80.5	112.0	122.8	125.7
82.5°	43.2	58.9	80.5	83.5	84.5
85°	26.5	36.3	47.1	47.1	47.1
87.5°	12.8	14.7	16.7	15.7	15.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)