

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: P312897

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-S-CA125-W2A-U-4000K**

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: P312897
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-L83050-S-CA125-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 4000K 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: 2147.0 lumens
Efficiency: N/A
Efficacy: 125.6 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

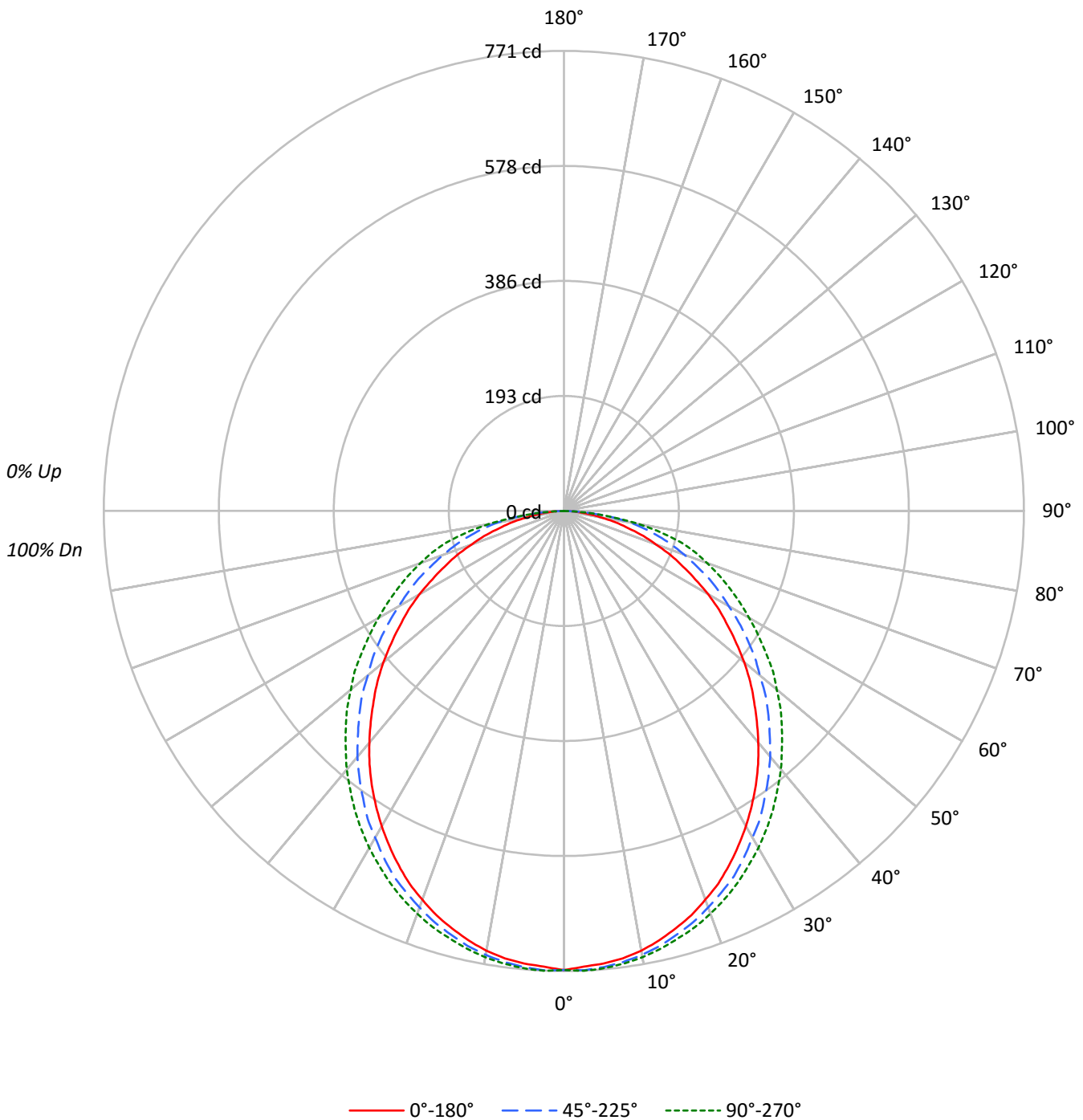
Input Watts (W): 17.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2070	2070	2070
5°	2056	2073	2078
10°	2045	2064	2075
15°	2018	2046	2065
20°	1985	2025	2057
25°	1945	2005	2043
30°	1896	1964	2026
35°	1843	1928	2008
40°	1781	1890	1988
45°	1716	1845	1967
50°	1652	1795	1950
55°	1574	1763	1936
60°	1504	1720	1930
65°	1403	1710	1952
70°	1293	1695	2009
75°	1167	1719	2115
80°	1009	1770	1987
85°	834	1485	1485



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.8	3.4
10°-20°	207.0	9.6
20°-30°	309.8	14.4
30°-40°	366.9	17.1
40°-50°	373.9	17.4
50°-60°	335.1	15.6
60°-70°	262.4	12.2
70°-80°	169.2	7.9
80°-90°	50.0	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°	589.6	27.5
0°-40°	956.5	44.5
0°-60°	1665.5	77.6
0°-90°	2147.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2147.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	769	769	769	769	769	
5°	761	763	767	768	769	72
15°	724	728	734	740	741	204
25°	655	661	675	684	688	302
35°	561	568	587	605	611	351
45°	451	461	485	510	517	348
55°	336	347	376	402	413	301
65°	220	233	268	294	306	219
75°	112	129	165	193	203	120
85°	27	37	48	48	48	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	769.3	769.3	769.3	769.3	769.3
2.5°	764.3	766.3	770.3	771.3	771.3
5°	761.3	763.3	767.3	768.3	769.3
7.5°	756.3	757.3	762.3	764.3	765.3
10°	748.3	750.3	755.3	758.3	759.3
12.5°	737.3	740.3	746.3	750.3	751.3
15°	724.3	728.3	734.3	740.3	741.3
17.5°	710.2	714.2	722.3	729.3	731.3
20°	693.2	698.2	707.2	715.2	718.2
22.5°	676.2	680.2	691.2	701.2	704.2
25°	655.1	661.1	675.2	684.2	688.2
27.5°	633.1	640.1	654.1	666.2	670.2
30°	610.1	617.1	632.1	647.1	652.1
32.5°	586.0	594.0	612.1	627.1	632.1
35°	561.0	568.0	587.0	605.1	611.1
37.5°	534.9	540.9	563.0	582.0	588.0
40°	506.9	514.9	537.9	560.0	566.0
42.5°	478.8	487.8	510.9	534.9	540.9
45°	450.8	460.8	484.8	509.9	516.9
47.5°	423.7	431.8	458.8	482.8	492.9
50°	394.7	402.7	428.7	455.8	465.8
52.5°	364.6	375.7	403.7	429.7	441.8
55°	335.6	346.6	375.7	401.7	412.7
57.5°	308.5	317.6	347.6	374.7	385.7
60°	279.5	287.5	319.6	348.6	358.6
62.5°	248.4	260.5	293.5	320.6	332.6
65°	220.4	233.4	268.5	294.5	306.5
67.5°	194.3	206.4	240.4	268.5	281.5
70°	164.3	180.3	215.4	243.4	255.4
72.5°	140.2	154.3	190.3	218.4	231.4
75°	112.2	129.2	165.3	193.3	203.4
77.5°	89.2	106.2	140.2	162.3	167.3
80°	65.1	82.1	114.2	125.2	128.2
82.5°	44.1	60.1	82.1	85.1	86.1
85°	27.0	37.1	48.1	48.1	48.1
87.5°	13.0	15.0	17.0	16.0	16.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)