

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: P308881

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-S-CA125-W2A-U-3500K**

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: P308881  
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-3500K  
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: 1997.0 lumens  
Efficiency: N/A  
Efficacy: 118.9 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

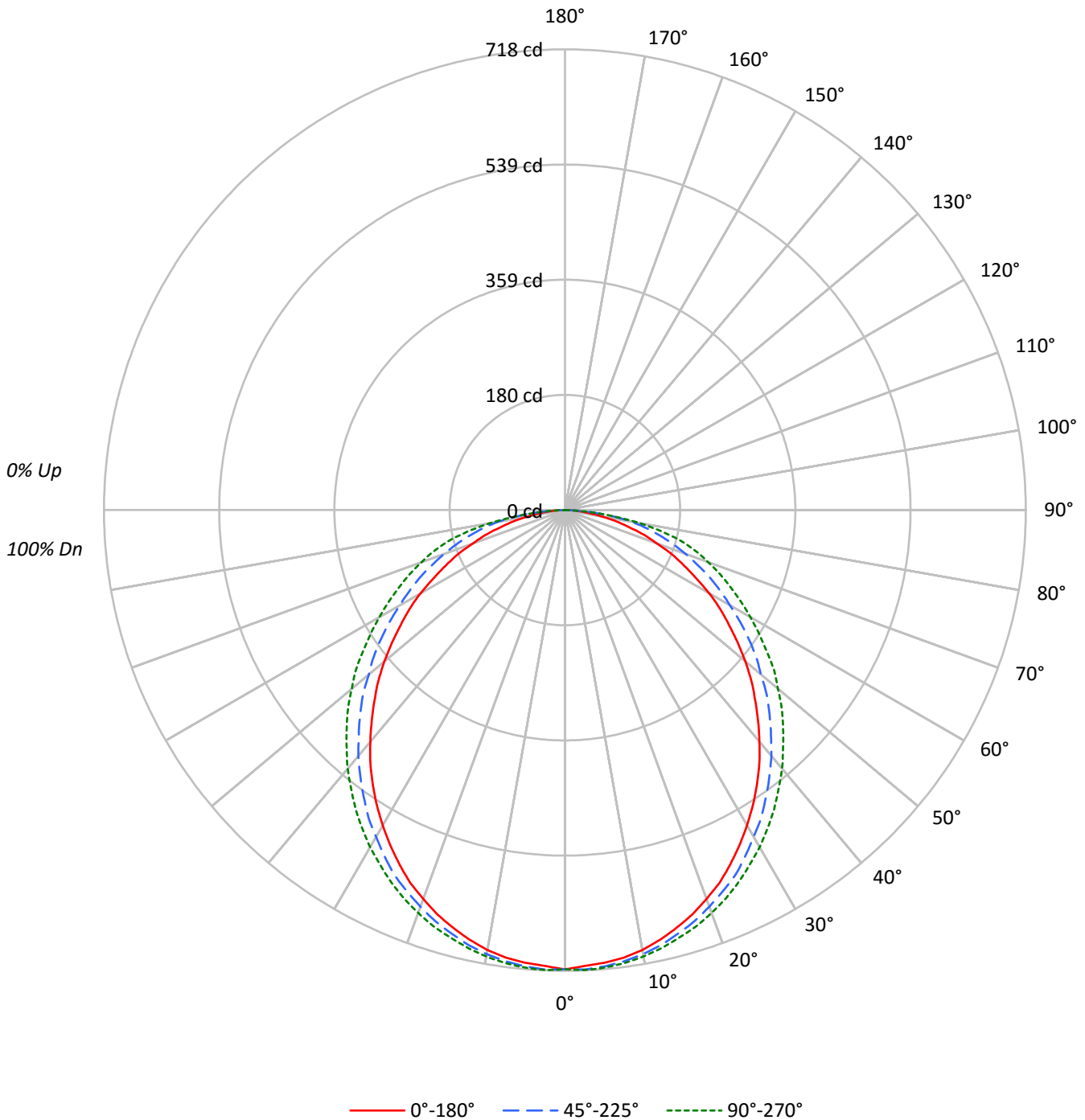
Input Watts (W): 16.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1926	1926	1926
5°	1913	1928	1933
10°	1902	1920	1930
15°	1877	1903	1921
20°	1847	1884	1913
25°	1809	1865	1901
30°	1763	1827	1885
35°	1714	1794	1867
40°	1656	1758	1849
45°	1596	1716	1830
50°	1537	1670	1814
55°	1464	1639	1801
60°	1399	1600	1795
65°	1305	1590	1815
70°	1202	1576	1869
75°	1085	1598	1966
80°	939	1646	1849
85°	778	1380	1380



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.7	3.4
10°-20°	192.6	9.6
20°-30°	288.2	14.4
30°-40°	341.2	17.1
40°-50°	347.8	17.4
50°-60°	311.7	15.6
60°-70°	244.0	12.2
70°-80°	157.3	7.9
80°-90°	46.5	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°	548.4	27.5
0°-40°	889.6	44.5
0°-60°	1549.1	77.6
0°-90°	1997.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1997.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	716	716	716	716	716	
5°	708	710	714	715	716	67
15°	674	677	683	689	690	190
25°	609	615	628	636	640	281
35°	522	528	546	563	568	326
45°	419	429	451	474	481	324
55°	312	322	349	374	384	280
65°	205	217	250	274	285	204
75°	104	120	154	180	189	112
85°	25	34	45	45	45	30
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	715.6	715.6	715.6	715.6	715.6
2.5°	710.9	712.8	716.5	717.5	717.5
5°	708.1	710.0	713.7	714.7	715.6
7.5°	703.5	704.4	709.1	710.9	711.9
10°	696.0	697.9	702.5	705.3	706.3
12.5°	685.8	688.6	694.2	697.9	698.8
15°	673.7	677.4	683.0	688.6	689.5
17.5°	660.6	664.3	671.8	678.3	680.2
20°	644.8	649.4	657.8	665.3	668.1
22.5°	628.9	632.7	642.9	652.2	655.0
25°	609.4	615.0	628.0	636.4	640.1
27.5°	588.9	595.4	608.4	619.6	623.3
30°	567.4	574.0	587.9	601.9	606.6
32.5°	545.1	552.5	569.3	583.3	587.9
35°	521.8	528.3	546.0	562.8	568.4
37.5°	497.6	503.1	523.6	541.3	546.9
40°	471.5	478.9	500.4	520.9	526.4
42.5°	445.4	453.8	475.2	497.6	503.1
45°	419.3	428.6	451.0	474.3	480.8
47.5°	394.1	401.6	426.7	449.1	458.4
50°	367.1	374.6	398.8	423.9	433.3
52.5°	339.2	349.4	375.5	399.7	410.9
55°	312.1	322.4	349.4	373.6	383.9
57.5°	287.0	295.4	323.3	348.5	358.7
60°	260.0	267.4	297.2	324.3	333.6
62.5°	231.1	242.3	273.0	298.2	309.3
65°	205.0	217.1	249.7	273.9	285.1
67.5°	180.8	191.9	223.6	249.7	261.8
70°	152.8	167.7	200.3	226.4	237.6
72.5°	130.4	143.5	177.0	203.1	215.2
75°	104.4	120.2	153.7	179.8	189.1
77.5°	82.9	98.8	130.4	150.9	155.6
80°	60.6	76.4	106.2	116.5	119.3
82.5°	41.0	55.9	76.4	79.2	80.1
85°	25.2	34.5	44.7	44.7	44.7
87.5°	12.1	14.0	15.8	14.9	14.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)