

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: P308912

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-S-CP250-W2A-U-5500K**

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: P308912
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-CP250-W2A-U-5500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.250" 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: 1980.0 lumens
Efficiency: N/A
Efficacy: 115.1 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

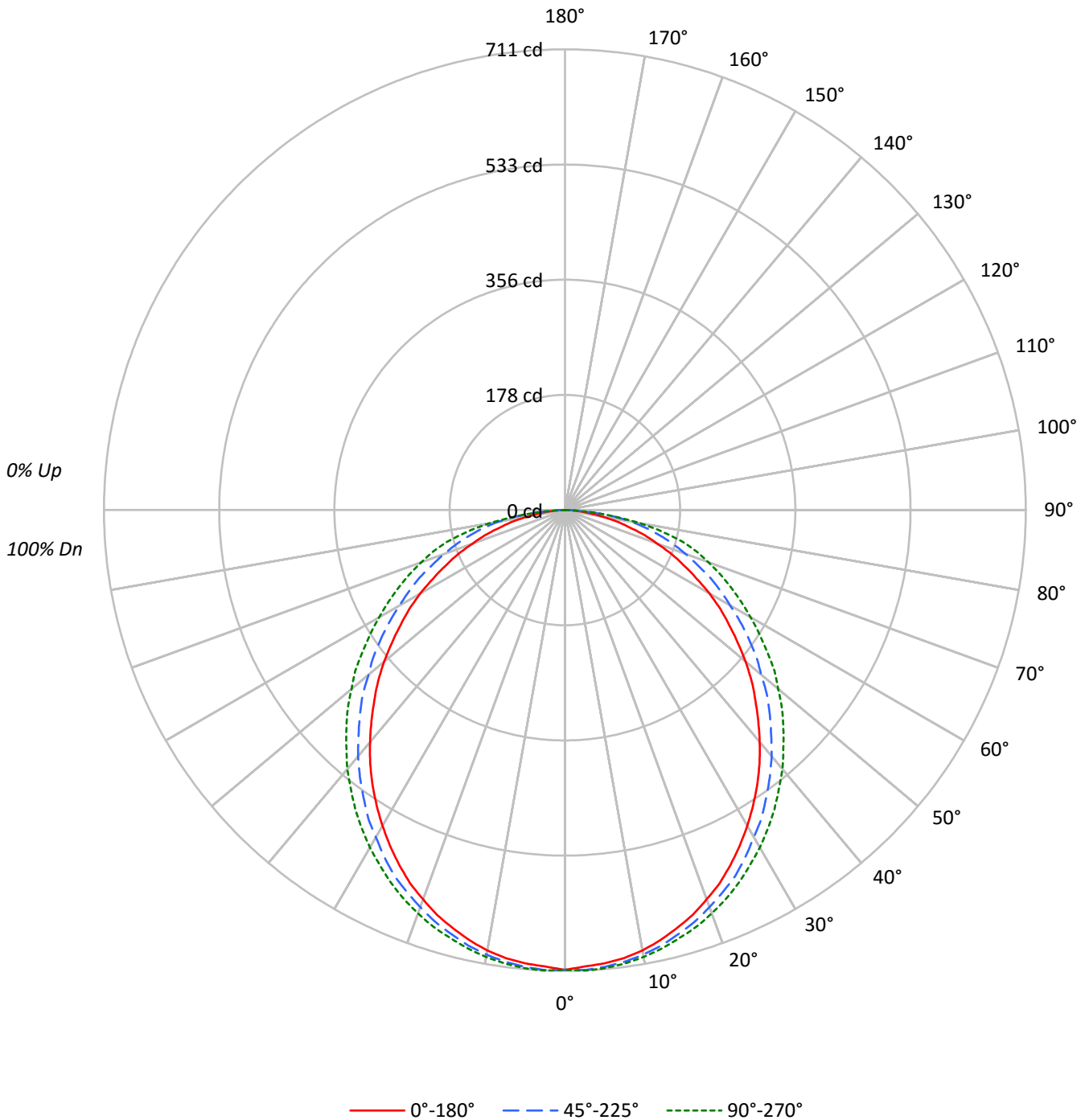
Input Watts (W): 17.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1909	1909	1909
5°	1897	1911	1917
10°	1886	1903	1914
15°	1861	1887	1904
20°	1831	1868	1897
25°	1794	1849	1885
30°	1748	1811	1869
35°	1699	1779	1851
40°	1642	1743	1834
45°	1582	1701	1814
50°	1524	1655	1798
55°	1452	1625	1786
60°	1387	1586	1780
65°	1294	1577	1800
70°	1192	1563	1854
75°	1076	1585	1949
80°	930	1632	1832
85°	769	1368	1368



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.1	3.4
10°-20°	190.9	9.6
20°-30°	285.7	14.4
30°-40°	338.3	17.1
40°-50°	344.8	17.4
50°-60°	309.0	15.6
60°-70°	242.0	12.2
70°-80°	156.0	7.9
80°-90°	46.1	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°	543.7	27.5
0°-40°	882.1	44.5
0°-60°	1535.9	77.6
0°-90°	1980.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1980.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	710	710	710	710	710	
5°	702	704	708	709	710	67
15°	668	672	677	683	684	188
25°	604	610	623	631	635	278
35°	517	524	541	558	564	323
45°	416	425	447	470	477	321
55°	310	320	346	370	381	277
65°	203	215	248	272	283	202
75°	104	119	152	178	188	111
85°	25	34	44	44	44	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	709.5	709.5	709.5	709.5	709.5
2.5°	704.9	706.7	710.4	711.3	711.3
5°	702.1	704.0	707.6	708.6	709.5
7.5°	697.5	698.4	703.0	704.9	705.8
10°	690.1	691.9	696.6	699.3	700.3
12.5°	679.9	682.7	688.2	691.9	692.9
15°	667.9	671.6	677.2	682.7	683.6
17.5°	655.0	658.7	666.1	672.5	674.4
20°	639.3	643.9	652.2	659.6	662.4
22.5°	623.6	627.3	637.4	646.7	649.4
25°	604.2	609.7	622.7	631.0	634.7
27.5°	583.9	590.3	603.3	614.3	618.0
30°	562.6	569.1	582.9	596.8	601.4
32.5°	540.4	547.8	564.5	578.3	582.9
35°	517.3	523.8	541.4	558.0	563.5
37.5°	493.3	498.9	519.2	536.7	542.3
40°	467.5	474.8	496.1	516.4	522.0
42.5°	441.6	449.9	471.1	493.3	498.9
45°	415.7	425.0	447.1	470.2	476.7
47.5°	390.8	398.2	423.1	445.3	454.5
50°	364.0	371.4	395.4	420.3	429.6
52.5°	336.3	346.4	372.3	396.3	407.4
55°	309.5	319.6	346.4	370.5	380.6
57.5°	284.5	292.9	320.6	345.5	355.7
60°	257.7	265.1	294.7	321.5	330.7
62.5°	229.1	240.2	270.7	295.6	306.7
65°	203.2	215.3	247.6	271.6	282.7
67.5°	179.2	190.3	221.7	247.6	259.6
70°	151.5	166.3	198.6	224.5	235.6
72.5°	129.3	142.3	175.5	201.4	213.4
75°	103.5	119.2	152.4	178.3	187.5
77.5°	82.2	97.9	129.3	149.7	154.3
80°	60.0	75.8	105.3	115.5	118.2
82.5°	40.6	55.4	75.8	78.5	79.4
85°	24.9	34.2	44.3	44.3	44.3
87.5°	12.0	13.9	15.7	14.8	14.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)