

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: P308902

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-S-CP187-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: P308902  
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-CP187-W2A-U-5000K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.187" 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: 1977.0 lumens  
Efficiency: N/A  
Efficacy: 115.6 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

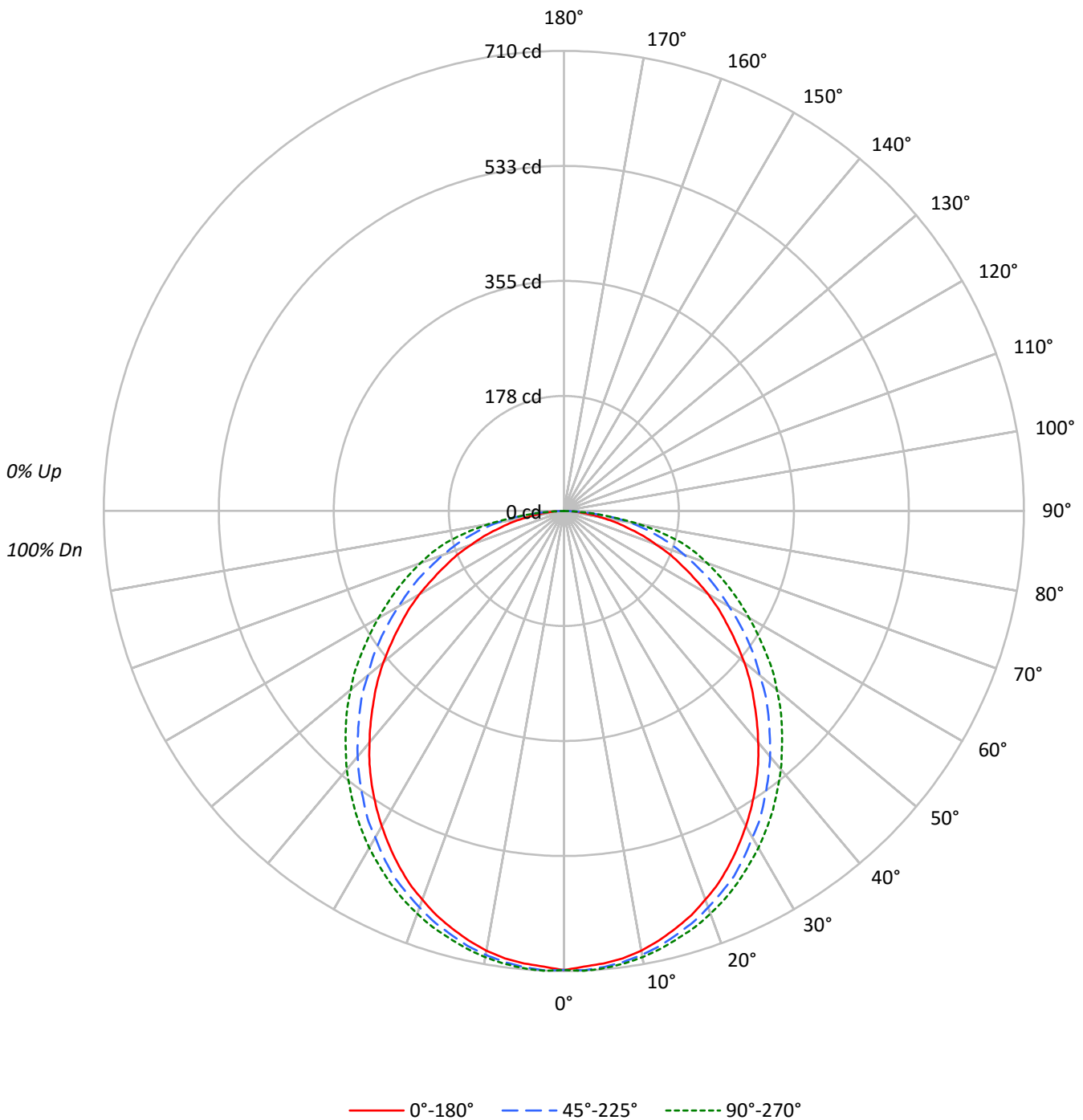
Input Watts (W): 17.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1906	1906	1906
5°	1894	1909	1914
10°	1883	1900	1911
15°	1858	1884	1902
20°	1828	1865	1894
25°	1791	1846	1882
30°	1746	1808	1866
35°	1697	1776	1849
40°	1639	1740	1831
45°	1580	1699	1811
50°	1521	1653	1796
55°	1450	1623	1783
60°	1385	1584	1777
65°	1292	1574	1798
70°	1190	1560	1851
75°	1074	1582	1947
80°	930	1630	1830
85°	769	1368	1368



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.0	3.4
10°-20°	190.7	9.6
20°-30°	285.3	14.4
30°-40°	337.8	17.1
40°-50°	344.3	17.4
50°-60°	308.6	15.6
60°-70°	241.6	12.2
70°-80°	155.8	7.9
80°-90°	46.0	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°	542.9	27.5
0°-40°	880.7	44.5
0°-60°	1533.6	77.6
0°-90°	1977.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1977.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	708	708	708	708	708	
5°	701	703	707	708	708	67
15°	667	671	676	682	683	188
25°	603	609	622	630	634	278
35°	517	523	540	557	563	323
45°	415	424	446	470	476	321
55°	309	319	346	370	380	277
65°	203	215	247	271	282	202
75°	103	119	152	178	187	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°	708.4	708.4	708.4	708.4	708.4
2.5°	703.8	705.7	709.3	710.3	710.3
5°	701.0	702.9	706.6	707.5	708.4
7.5°	696.4	697.4	702.0	703.8	704.7
10°	689.0	690.9	695.5	698.3	699.2
12.5°	678.9	681.7	687.2	690.9	691.8
15°	666.9	670.6	676.1	681.7	682.6
17.5°	654.0	657.7	665.1	671.5	673.4
20°	638.3	642.9	651.2	658.6	661.4
22.5°	622.6	626.3	636.5	645.7	648.5
25°	603.3	608.8	621.7	630.0	633.7
27.5°	583.0	589.4	602.3	613.4	617.1
30°	561.8	568.2	582.0	595.9	600.5
32.5°	539.6	547.0	563.6	577.4	582.0
35°	516.6	523.0	540.5	557.1	562.7
37.5°	492.6	498.1	518.4	535.9	541.5
40°	466.7	474.1	495.3	515.6	521.2
42.5°	440.9	449.2	470.4	492.6	498.1
45°	415.1	424.3	446.5	469.5	476.0
47.5°	390.2	397.6	422.5	444.6	453.8
50°	363.4	370.8	394.8	419.7	428.9
52.5°	335.8	345.9	371.7	395.7	406.8
55°	309.0	319.2	345.9	369.9	380.0
57.5°	284.1	292.4	320.1	345.0	355.1
60°	257.4	264.7	294.3	321.0	330.2
62.5°	228.8	239.8	270.3	295.2	306.2
65°	202.9	214.9	247.2	271.2	282.3
67.5°	179.0	190.0	221.4	247.2	259.2
70°	151.3	166.0	198.3	224.1	235.2
72.5°	129.1	142.1	175.3	201.1	213.1
75°	103.3	119.0	152.2	178.0	187.3
77.5°	82.1	97.8	129.1	149.4	154.0
80°	60.0	75.6	105.2	115.3	118.1
82.5°	40.6	55.3	75.6	78.4	79.3
85°	24.9	34.1	44.3	44.3	44.3
87.5°	12.0	13.8	15.7	14.8	14.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)