

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: P308370

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-RDP-CP250-W2A-U-4500K**

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: P308370  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)  
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-RDP-CP250-W2A-U-4500K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 1228.0 lumens  
Efficiency: N/A  
Efficacy: 72.2 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

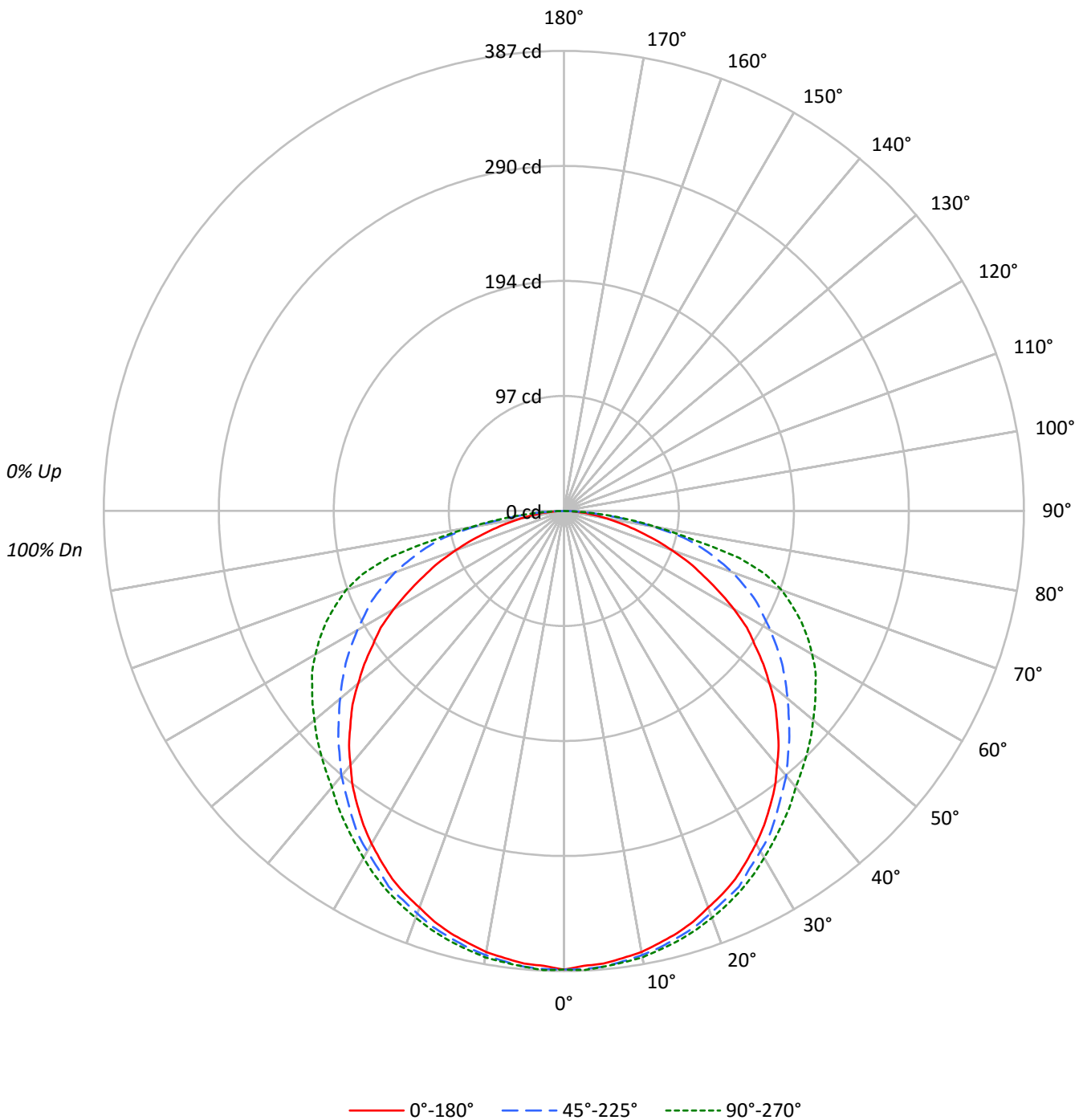
Input Watts (W): 17  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P308370

CATALOG NUMBER: 22FCZ2-20HE-UNV-L82765-RDP-CP250-W2A-U-4500K

### Luminous Intensity Polar Plot





TEST NUMBER: P308370

CATALOG NUMBER: 22FCZ2-20HE-UNV-L82765-RDP-CP250-W2A-U-4500K

**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	98	94	105	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1038	1038	1038
5°	1032	1039	1039
10°	1029	1037	1042
15°	1024	1034	1042
20°	1017	1032	1043
25°	1014	1035	1046
30°	1005	1027	1047
35°	994	1024	1054
40°	980	1022	1066
45°	966	1021	1100
50°	945	1029	1146
55°	920	1051	1212
60°	890	1079	1298
65°	828	1133	1403
70°	761	1187	1535
75°	666	1249	1588
80°	573	1190	1246
85°	503	865	948



TEST NUMBER: P308370

CATALOG NUMBER: 22FCZ2-20HE-UNV-L82765-RDP-CP250-W2A-U-4500K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	36.5	3.0
10°-20°	104.8	8.5
20°-30°	159.8	13.0
30°-40°	195.2	15.9
40°-50°	208.7	17.0
50°-60°	201.4	16.4
60°-70°	173.4	14.1
70°-80°	117.3	9.6
80°-90°	30.9	2.5
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°	301.1	24.5
0°-40°	496.3	40.4
0°-60°	906.3	73.8
0°-90°	1228.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1228.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	386	386	386	386	386	
5°	382	383	385	385	385	36
15°	368	369	371	373	374	104
25°	342	343	349	350	352	157
35°	303	305	312	318	321	189
45°	254	258	268	282	289	196
55°	196	202	224	247	258	176
65°	130	143	178	206	220	129
75°	64	85	120	144	153	69
85°	16	23	28	29	31	18
90°	0	0	0	0	0	



TEST NUMBER: P308370

CATALOG NUMBER: 22FCZ2-20HE-UNV-L82765-RDP-CP250-W2A-U-4500K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	385.7	385.7	385.7	385.7	385.7
2.5°	383.0	383.9	385.7	385.7	386.6
5°	382.1	383.0	384.8	384.8	384.8
7.5°	379.4	380.3	382.1	383.0	383.0
10°	376.7	377.6	379.4	380.3	381.2
12.5°	372.2	373.1	375.8	377.6	377.6
15°	367.7	368.6	371.3	373.1	374.0
17.5°	362.2	364.1	366.8	368.6	369.5
20°	355.0	356.8	360.4	363.2	364.1
22.5°	348.7	350.5	354.1	356.8	358.6
25°	341.5	343.3	348.7	350.5	352.3
27.5°	332.4	334.2	338.8	342.4	345.1
30°	323.4	325.2	330.6	335.1	337.0
32.5°	313.5	316.2	322.5	326.1	328.8
35°	302.6	305.3	311.7	318.0	320.7
37.5°	291.8	294.5	300.8	309.0	312.6
40°	279.1	282.8	290.9	301.7	303.5
42.5°	267.4	271.9	279.1	291.8	296.3
45°	253.8	258.4	268.3	281.8	289.1
47.5°	241.2	245.7	256.6	272.8	281.8
50°	225.8	232.2	245.7	264.7	273.7
52.5°	211.4	216.8	234.9	255.7	266.5
55°	196.0	202.4	224.0	246.6	258.4
57.5°	182.5	187.9	212.3	237.6	251.1
60°	165.3	172.5	200.5	227.6	241.2
62.5°	147.2	158.1	188.8	216.8	231.3
65°	130.1	142.7	178.0	206.0	220.4
67.5°	114.7	128.3	164.4	194.2	207.8
70°	96.7	113.8	150.9	179.8	195.1
72.5°	80.4	99.4	135.5	164.4	178.0
75°	64.1	84.9	120.1	144.5	152.7
77.5°	49.7	69.6	103.0	110.2	111.1
80°	37.0	55.1	76.8	77.7	80.4
82.5°	25.3	38.8	49.7	54.2	55.1
85°	16.3	22.6	28.0	28.9	30.7
87.5°	7.2	8.1	9.9	9.0	9.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)