

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: P312592

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-RDP-CA08-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: P312592  
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-L83050-RDP-CA08-W2A-U-4000K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" 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**

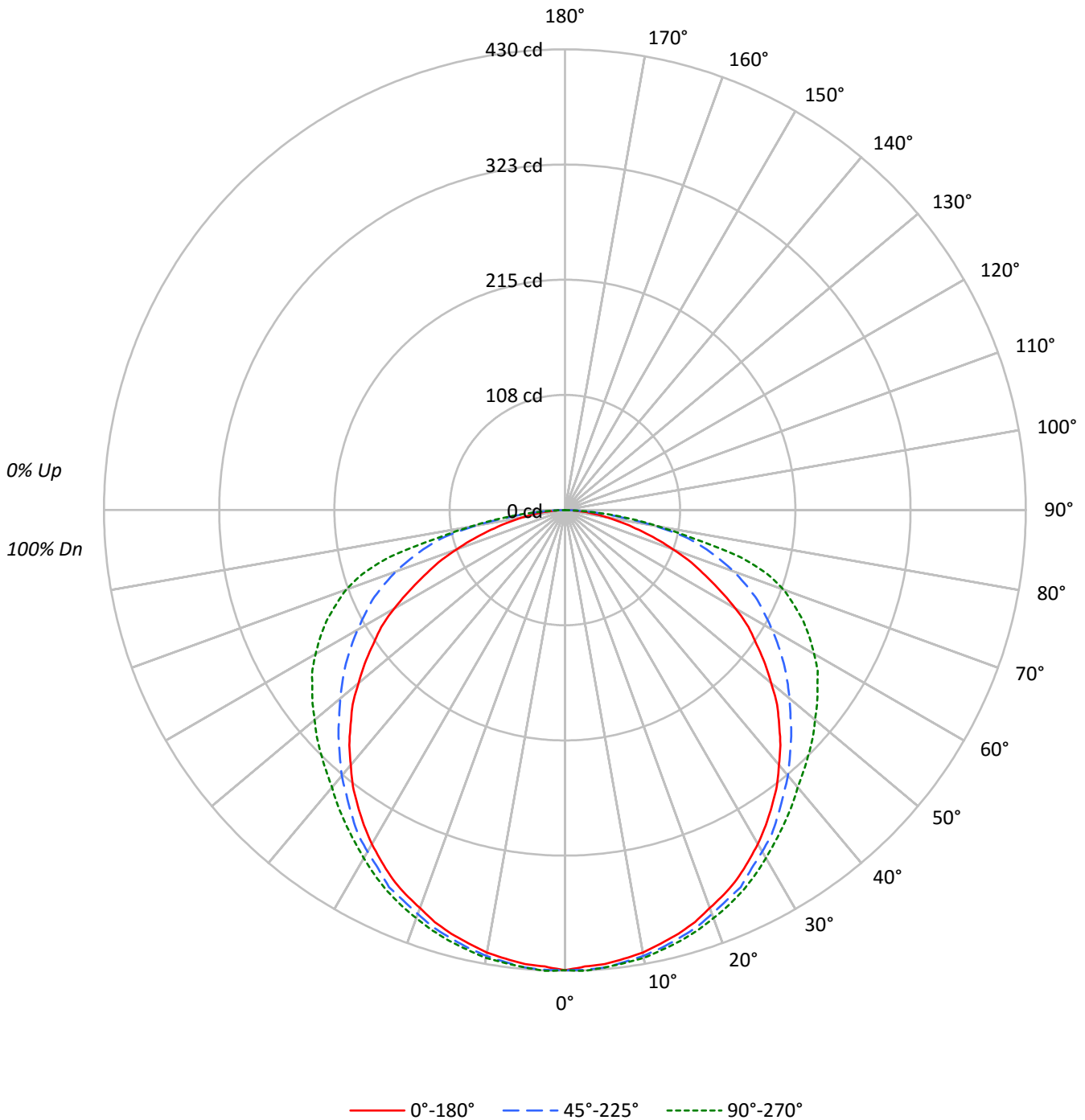
Lumens per Lamp: N/A  
Luminaire Lumens: 1367.0 lumens  
Efficiency: N/A  
Efficacy: 79.9 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.1  
Input Voltage (V): NR  
Input Current (A<sub>in</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



TEST NUMBER: P312592

CATALOG NUMBER: 22FCZ2-20HE-UNV-L83050-RDP-CA08-W2A-U-4000K

### Luminous Intensity Polar Plot





TEST NUMBER: P312592

CATALOG NUMBER: 22FCZ2-20HE-UNV-L83050-RDP-CA08-W2A-U-4000K

**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°	1156	1156	1156
5°	1149	1157	1157
10°	1146	1154	1160
15°	1140	1151	1160
20°	1132	1149	1161
25°	1129	1153	1165
30°	1119	1144	1166
35°	1107	1140	1173
40°	1091	1137	1187
45°	1075	1137	1225
50°	1052	1145	1276
55°	1024	1170	1349
60°	990	1201	1445
65°	922	1261	1563
70°	847	1321	1709
75°	742	1390	1766
80°	638	1325	1387
85°	559	963	1056



TEST NUMBER: P312592

CATALOG NUMBER: 22FCZ2-20HE-UNV-L83050-RDP-CA08-W2A-U-4000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	40.6	3.0
10°-20°	116.6	8.5
20°-30°	177.9	13.0
30°-40°	217.3	15.9
40°-50°	232.3	17.0
50°-60°	224.2	16.4
60°-70°	193.0	14.1
70°-80°	130.6	9.6
80°-90°	34.5	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°	335.2	24.5
0°-40°	552.4	40.4
0°-60°	1008.9	73.8
0°-90°	1367.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1367.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	429	429	429	429	429	
5°	425	426	428	428	428	40
15°	409	410	413	415	416	115
25°	380	382	388	390	392	175
35°	337	340	347	354	357	211
45°	283	288	299	314	322	218
55°	218	225	249	274	288	196
65°	145	159	198	229	245	144
75°	71	94	134	161	170	77
85°	18	25	31	32	34	20
90°	0	0	0	0	0	



TEST NUMBER: P312592

CATALOG NUMBER: 22FC22-20HE-UNV-L83050-RDP-CA08-W2A-U-4000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	429.4	429.4	429.4	429.4	429.4
2.5°	426.4	427.4	429.4	429.4	430.4
5°	425.4	426.4	428.4	428.4	428.4
7.5°	422.4	423.4	425.4	426.4	426.4
10°	419.3	420.3	422.4	423.4	424.4
12.5°	414.3	415.3	418.3	420.3	420.3
15°	409.3	410.3	413.3	415.3	416.3
17.5°	403.3	405.3	408.3	410.3	411.3
20°	395.2	397.2	401.2	404.3	405.3
22.5°	388.2	390.2	394.2	397.2	399.2
25°	380.1	382.1	388.2	390.2	392.2
27.5°	370.1	372.1	377.1	381.1	384.1
30°	360.0	362.0	368.1	373.1	375.1
32.5°	348.9	352.0	359.0	363.0	366.0
35°	336.9	339.9	346.9	354.0	357.0
37.5°	324.8	327.8	334.9	343.9	347.9
40°	310.7	314.8	323.8	335.9	337.9
42.5°	297.7	302.7	310.7	324.8	329.8
45°	282.6	287.6	298.7	313.8	321.8
47.5°	268.5	273.5	285.6	303.7	313.8
50°	251.4	258.4	273.5	294.6	304.7
52.5°	235.3	241.3	261.5	284.6	296.7
55°	218.2	225.3	249.4	274.5	287.6
57.5°	203.1	209.2	236.3	264.5	279.6
60°	184.0	192.1	223.2	253.4	268.5
62.5°	163.9	176.0	210.2	241.3	257.4
65°	144.8	158.9	198.1	229.3	245.4
67.5°	127.7	142.8	183.0	216.2	231.3
70°	107.6	126.7	167.9	200.1	217.2
72.5°	89.5	110.6	150.8	183.0	198.1
75°	71.4	94.5	133.7	160.9	169.9
77.5°	55.3	77.4	114.6	122.7	123.7
80°	41.2	61.3	85.5	86.5	89.5
82.5°	28.2	43.2	55.3	60.3	61.3
85°	18.1	25.1	31.2	32.2	34.2
87.5°	8.0	9.1	11.1	10.1	10.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)