

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: P308109

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-HRP-CA08-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: P308109  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 22FCZ2-24HE-UNV-L82765-HRP-CA08-W2A-U-4500K  
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" 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**

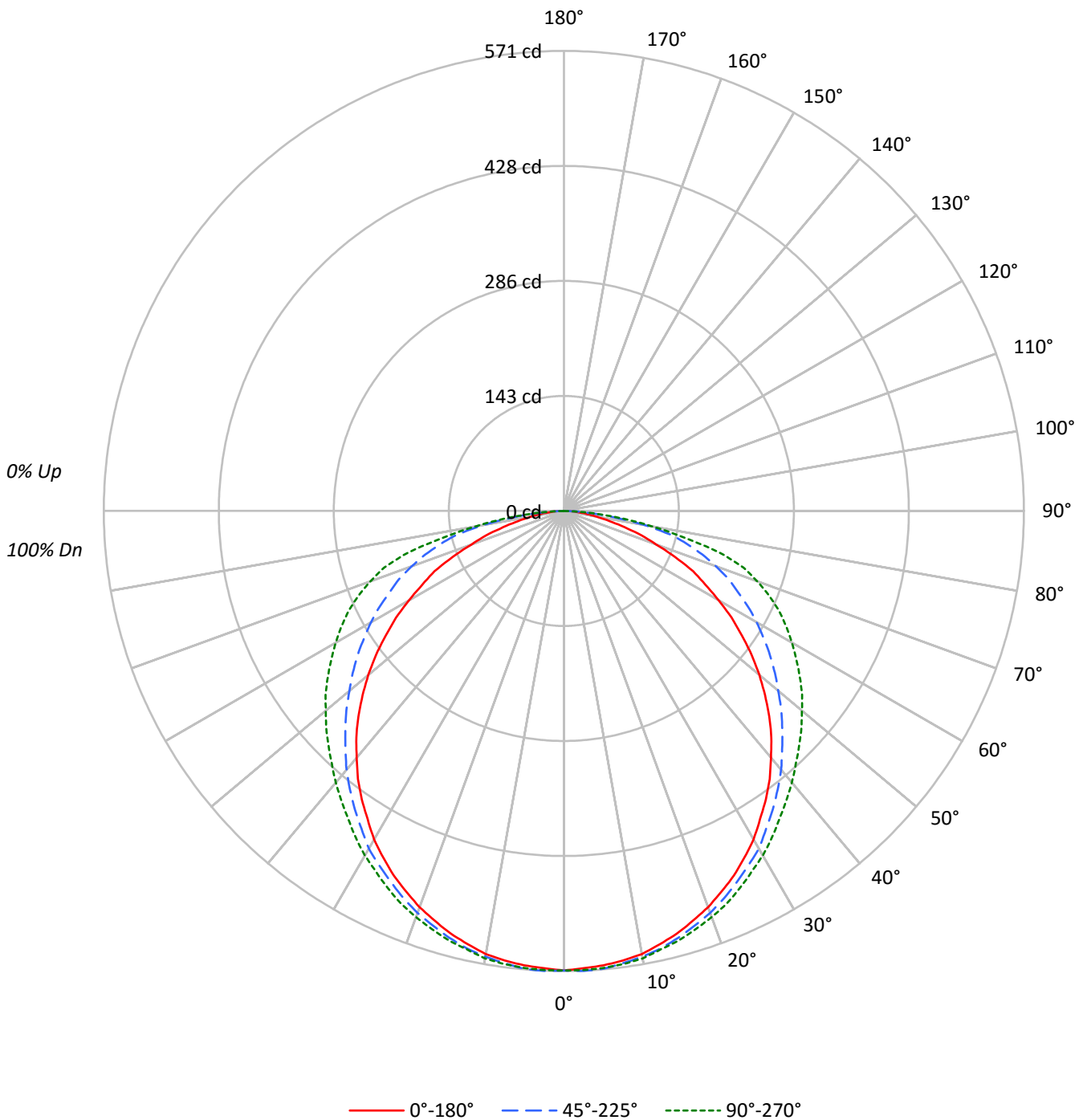
Lumens per Lamp: N/A  
Luminaire Lumens: 1732.0 lumens  
Efficiency: N/A  
Efficacy: 89.7 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 19.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
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



TEST NUMBER: P308109

CATALOG NUMBER: 22FCZ2-24HE-UNV-L82765-HRP-CA08-W2A-U-4500K

### Luminous Intensity Polar Plot





TEST NUMBER: P308109

CATALOG NUMBER: 22FCZ2-24HE-UNV-L82765-HRP-CA08-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	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

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

	0°	45°	90°
0°	1535	1535	1535
5°	1529	1541	1538
10°	1526	1535	1541
15°	1513	1528	1537
20°	1499	1521	1536
25°	1483	1509	1534
30°	1463	1504	1534
35°	1436	1486	1532
40°	1405	1474	1547
45°	1372	1459	1572
50°	1326	1454	1615
55°	1266	1466	1676
60°	1194	1488	1758
65°	1127	1517	1878
70°	963	1581	2012
75°	807	1647	2090
80°	660	1592	1743
85°	574	1179	1281



TEST NUMBER: P308109

CATALOG NUMBER: 22FCZ2-24HE-UNV-L82765-HRP-CA08-W2A-U-4500K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.1	3.1
10°-20°	154.6	8.9
20°-30°	234.3	13.5
30°-40°	283.0	16.3
40°-50°	297.3	17.2
50°-60°	279.7	16.2
60°-70°	233.2	13.5
70°-80°	154.6	8.9
80°-90°	41.2	2.4
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°	443.0	25.6
0°-40°	726.0	41.9
0°-60°	1303.0	75.2
0°-90°	1732.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1732.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	570	570	570	570	570	
5°	566	567	570	570	569	54
15°	543	545	548	551	552	153
25°	499	503	508	515	517	230
35°	437	441	452	462	466	273
45°	361	366	384	403	413	278
55°	270	282	312	344	357	241
65°	177	192	238	278	295	172
75°	78	108	158	191	201	84
85°	19	28	38	42	42	22
90°	0	0	0	0	0	



TEST NUMBER: P308109

CATALOG NUMBER: 22FC22-24HE-UNV-L82765-HRP-CA08-W2A-U-4500K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	570.3	570.3	570.3	570.3	570.3
2.5°	568.1	569.2	571.4	571.4	570.3
5°	566.0	567.1	570.3	570.3	569.2
7.5°	562.7	563.8	566.0	568.1	567.1
10°	558.3	559.4	561.6	563.8	563.8
12.5°	550.7	551.8	556.1	557.2	557.2
15°	543.0	545.2	548.5	550.7	551.8
17.5°	533.2	535.4	539.7	544.1	544.1
20°	523.3	525.5	531.0	535.4	536.5
22.5°	511.3	514.6	520.1	525.5	527.7
25°	499.3	502.6	508.1	514.6	516.8
27.5°	485.1	488.4	496.0	503.7	504.8
30°	470.9	474.2	484.0	490.6	493.8
32.5°	453.4	457.8	467.6	477.5	480.7
35°	437.0	441.4	452.3	462.2	466.5
37.5°	419.6	423.9	435.9	448.0	453.4
40°	399.9	405.3	419.6	432.7	440.3
42.5°	381.3	386.8	401.0	418.5	426.1
45°	360.6	366.0	383.5	403.2	413.0
47.5°	338.7	345.3	366.0	390.1	399.9
50°	316.8	324.5	347.4	374.8	385.7
52.5°	293.9	303.7	330.0	359.5	372.6
55°	269.9	281.9	312.5	344.2	357.3
57.5°	246.9	257.8	293.9	327.8	342.0
60°	221.8	236.0	276.4	311.4	326.7
62.5°	197.8	213.1	257.8	295.0	311.4
65°	177.0	192.3	238.2	277.5	295.0
67.5°	149.7	170.4	221.8	258.9	276.4
70°	122.4	150.8	201.0	239.3	255.7
72.5°	101.6	128.9	180.3	218.5	233.8
75°	77.6	108.2	158.4	191.2	201.0
77.5°	57.9	89.6	135.5	151.9	153.0
80°	42.6	68.8	102.7	108.2	112.5
82.5°	29.5	48.1	66.6	73.2	75.4
85°	18.6	28.4	38.2	41.5	41.5
87.5°	9.8	10.9	13.1	13.1	13.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)