

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: P308335

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-RDP-CA08-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: P308335  
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-CA08-W2A-U-5000K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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**

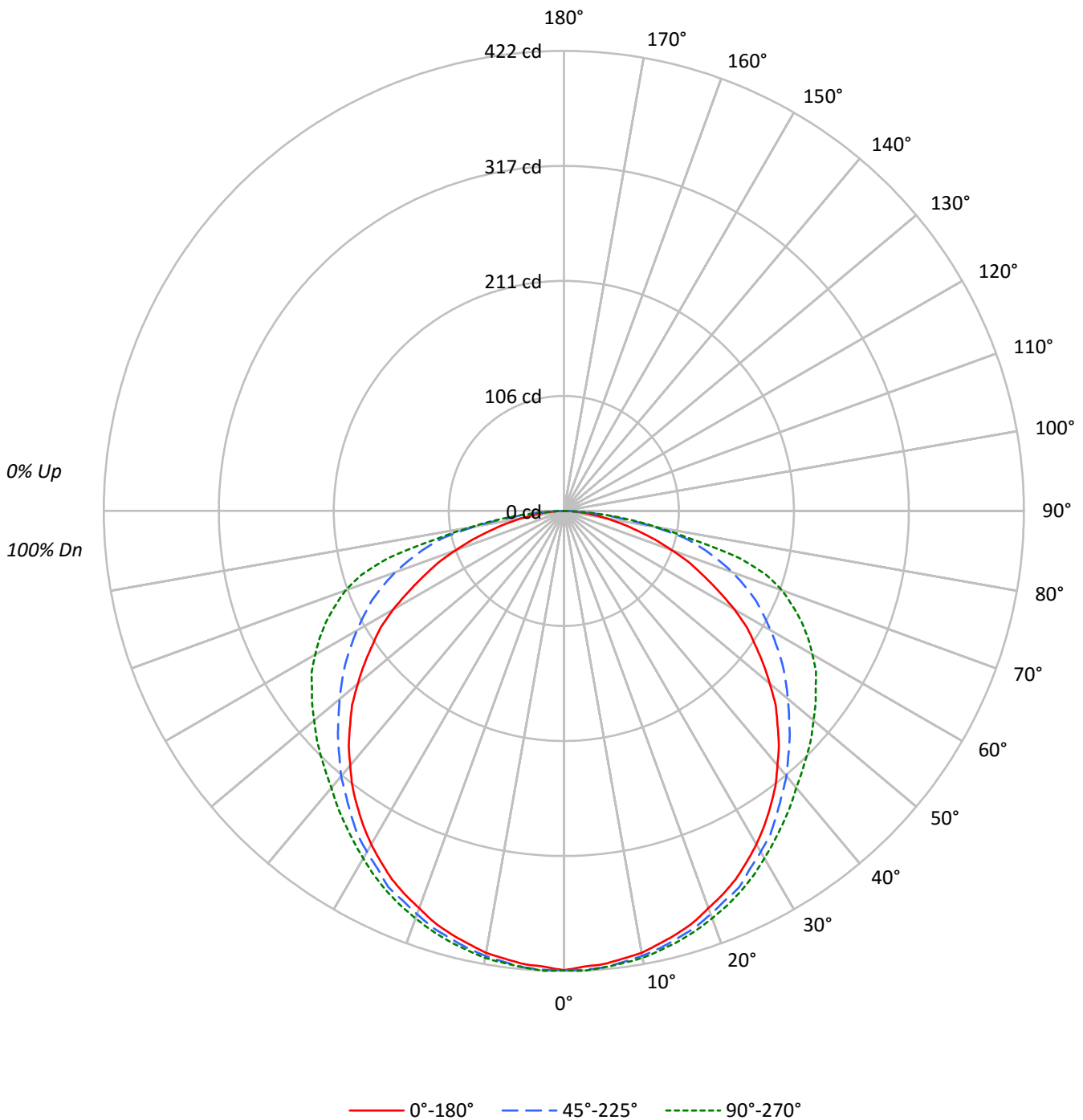
Lumens per Lamp: N/A  
Luminaire Lumens: 1341.0 lumens  
Efficiency: N/A  
Efficacy: 78.4 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
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: P308335

CATALOG NUMBER: 22FCZ2-20HE-UNV-L82765-RDP-CA08-W2A-U-5000K

### Luminous Intensity Polar Plot





TEST NUMBER: P308335

CATALOG NUMBER: 22FCZ2-20HE-UNV-L82765-RDP-CA08-W2A-U-5000K

**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°	1133	1133	1133
5°	1127	1135	1135
10°	1124	1132	1138
15°	1119	1129	1138
20°	1110	1127	1139
25°	1107	1131	1142
30°	1097	1122	1143
35°	1086	1118	1150
40°	1071	1116	1165
45°	1055	1115	1201
50°	1032	1123	1251
55°	1004	1148	1323
60°	971	1179	1418
65°	905	1237	1533
70°	831	1296	1677
75°	728	1364	1733
80°	626	1300	1361
85°	550	945	1034



TEST NUMBER: P308335

CATALOG NUMBER: 22FCZ2-20HE-UNV-L82765-RDP-CA08-W2A-U-5000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	39.8	3.0
10°-20°	114.4	8.5
20°-30°	174.6	13.0
30°-40°	213.1	15.9
40°-50°	227.9	17.0
50°-60°	219.9	16.4
60°-70°	189.3	14.1
70°-80°	128.1	9.6
80°-90°	33.8	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°	328.8	24.5
0°-40°	541.9	40.4
0°-60°	989.7	73.8
0°-90°	1341.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1341.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	421	421	421	421	421	
5°	417	418	420	420	420	40
15°	402	402	405	407	408	113
25°	373	375	381	383	385	172
35°	330	333	340	347	350	207
45°	277	282	293	308	316	214
55°	214	221	245	269	282	192
65°	142	156	194	225	241	141
75°	70	93	131	158	167	75
85°	18	25	31	32	34	20
90°	0	0	0	0	0	



TEST NUMBER: P308335

CATALOG NUMBER: 22FC22-20HE-UNV-L82765-RDP-CA08-W2A-U-5000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	421.2	421.2	421.2	421.2	421.2
2.5°	418.3	419.3	421.2	421.2	422.2
5°	417.3	418.3	420.2	420.2	420.2
7.5°	414.3	415.3	417.3	418.3	418.3
10°	411.4	412.4	414.3	415.3	416.3
12.5°	406.4	407.4	410.4	412.4	412.4
15°	401.5	402.5	405.4	407.4	408.4
17.5°	395.6	397.6	400.5	402.5	403.5
20°	387.7	389.7	393.6	396.6	397.6
22.5°	380.8	382.8	386.7	389.7	391.6
25°	372.9	374.9	380.8	382.8	384.7
27.5°	363.0	365.0	369.9	373.9	376.8
30°	353.2	355.1	361.1	366.0	368.0
32.5°	342.3	345.3	352.2	356.1	359.1
35°	330.5	333.4	340.3	347.2	350.2
37.5°	318.6	321.6	328.5	337.4	341.3
40°	304.8	308.8	317.6	329.5	331.5
42.5°	292.0	296.9	304.8	318.6	323.6
45°	277.2	282.1	293.0	307.8	315.7
47.5°	263.4	268.3	280.2	297.9	307.8
50°	246.6	253.5	268.3	289.0	298.9
52.5°	230.8	236.8	256.5	279.2	291.0
55°	214.1	221.0	244.6	269.3	282.1
57.5°	199.3	205.2	231.8	259.4	274.2
60°	180.5	188.4	219.0	248.6	263.4
62.5°	160.8	172.6	206.2	236.8	252.5
65°	142.1	155.9	194.3	224.9	240.7
67.5°	125.3	140.1	179.5	212.1	226.9
70°	105.6	124.3	164.7	196.3	213.1
72.5°	87.8	108.5	148.0	179.5	194.3
75°	70.0	92.7	131.2	157.8	166.7
77.5°	54.3	76.0	112.5	120.4	121.3
80°	40.4	60.2	83.9	84.8	87.8
82.5°	27.6	42.4	54.3	59.2	60.2
85°	17.8	24.7	30.6	31.6	33.5
87.5°	7.9	8.9	10.9	9.9	9.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)