

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: P308061

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-HRP-CA08-W2A-U-3000K**

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: P308061
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: 22FCZ2-20HE-UNV-L82765-HRP-CA08-W2A-U-3000K
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: 1427.0 lumens
Efficiency: N/A
Efficacy: 86.0 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

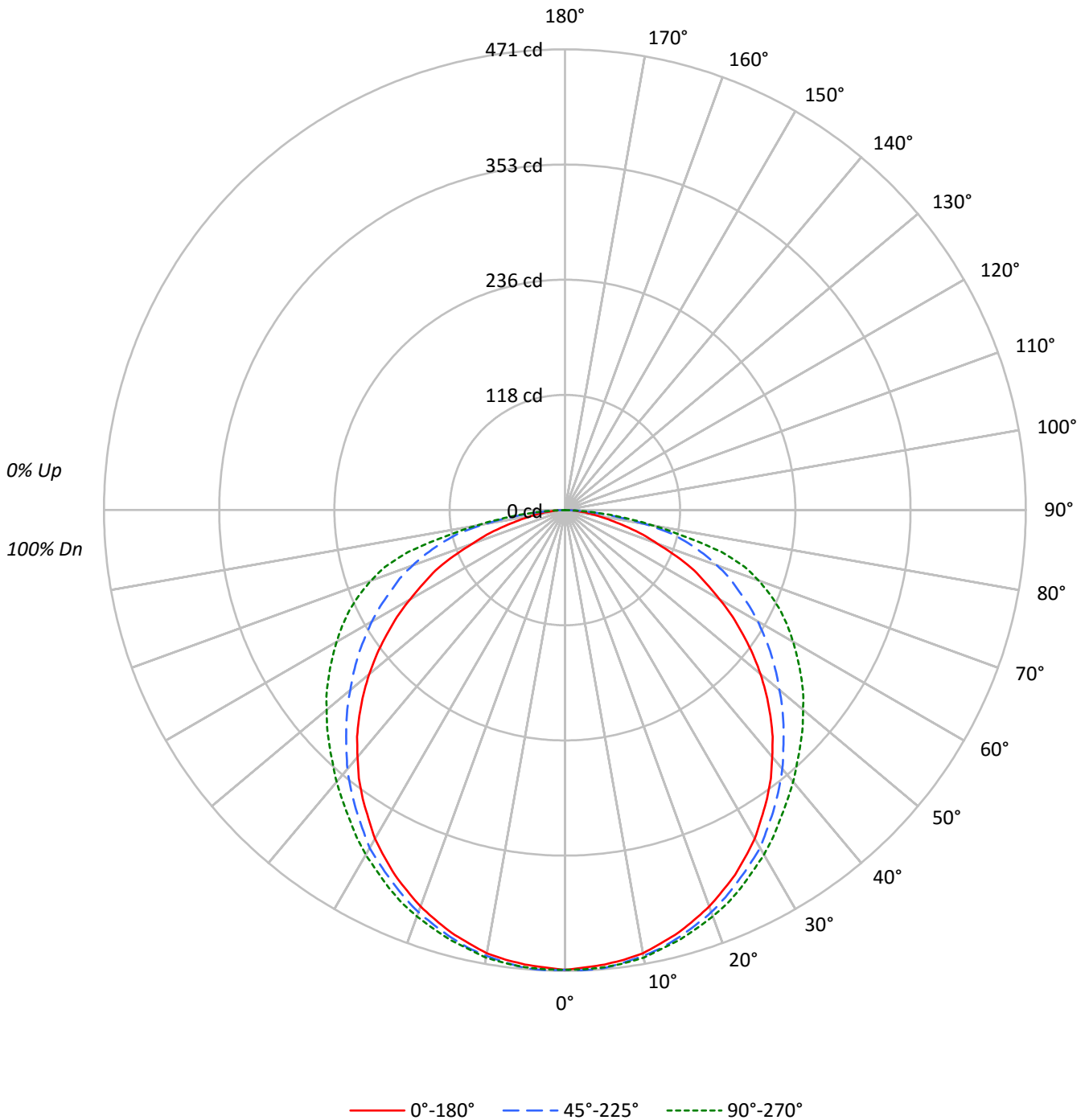
Input Watts (W): 16.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P308061

CATALOG NUMBER: 22FCZ2-20HE-UNV-L82765-HRP-CA08-W2A-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P308061

CATALOG NUMBER: 22FCZ2-20HE-UNV-L82765-HRP-CA08-W2A-U-3000K

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°	1264	1264	1264
5°	1260	1269	1267
10°	1257	1264	1269
15°	1246	1259	1266
20°	1235	1253	1266
25°	1222	1243	1264
30°	1206	1239	1264
35°	1183	1224	1263
40°	1157	1214	1274
45°	1131	1203	1295
50°	1093	1199	1330
55°	1043	1208	1381
60°	983	1225	1449
65°	928	1249	1547
70°	793	1303	1657
75°	664	1357	1722
80°	544	1311	1437
85°	472	973	1056



TEST NUMBER: P308061

CATALOG NUMBER: 22FCZ2-20HE-UNV-L82765-HRP-CA08-W2A-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.5	3.1
10°-20°	127.4	8.9
20°-30°	193.1	13.5
30°-40°	233.1	16.3
40°-50°	245.0	17.2
50°-60°	230.5	16.2
60°-70°	192.1	13.5
70°-80°	127.3	8.9
80°-90°	33.9	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°	365.0	25.6
0°-40°	598.1	41.9
0°-60°	1073.6	75.2
0°-90°	1427.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1427.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	470	470	470	470	470	
5°	466	467	470	470	469	44
15°	447	449	452	454	455	126
25°	411	414	419	424	426	189
35°	360	364	373	381	384	225
45°	297	302	316	332	340	229
55°	222	232	258	284	294	199
65°	146	158	196	229	243	142
75°	64	89	130	158	166	69
85°	15	23	32	34	34	18
90°	0	0	0	0	0	



TEST NUMBER: P308061

CATALOG NUMBER: 22FC22-20HE-UNV-L82765-HRP-CA08-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	469.9	469.9	469.9	469.9	469.9
2.5°	468.1	469.0	470.8	470.8	469.9
5°	466.3	467.2	469.9	469.9	469.0
7.5°	463.6	464.5	466.3	468.1	467.2
10°	460.0	460.9	462.7	464.5	464.5
12.5°	453.7	454.6	458.2	459.1	459.1
15°	447.4	449.2	451.9	453.7	454.6
17.5°	439.3	441.1	444.7	448.3	448.3
20°	431.2	433.0	437.5	441.1	442.0
22.5°	421.3	424.0	428.5	433.0	434.8
25°	411.4	414.1	418.6	424.0	425.8
27.5°	399.7	402.4	408.7	415.0	415.9
30°	388.0	390.7	398.8	404.2	406.9
32.5°	373.6	377.2	385.3	393.4	396.1
35°	360.1	363.7	372.7	380.8	384.4
37.5°	345.7	349.3	359.2	369.1	373.6
40°	329.5	334.0	345.7	356.5	362.8
42.5°	314.2	318.7	330.4	344.8	351.1
45°	297.1	301.6	316.0	332.2	340.3
47.5°	279.1	284.5	301.6	321.4	329.5
50°	261.1	267.4	286.3	308.8	317.8
52.5°	242.1	250.3	271.9	296.2	307.0
55°	222.3	232.2	257.5	283.6	294.4
57.5°	203.4	212.4	242.1	270.1	281.8
60°	182.7	194.4	227.7	256.6	269.2
62.5°	162.9	175.5	212.4	243.0	256.6
65°	145.8	158.4	196.2	228.6	243.0
67.5°	123.3	140.4	182.7	213.3	227.7
70°	100.8	124.2	165.6	197.1	210.6
72.5°	83.7	106.2	148.5	180.0	192.6
75°	63.9	89.1	130.5	157.5	165.6
77.5°	47.7	73.8	111.6	125.1	126.0
80°	35.1	56.7	84.6	89.1	92.7
82.5°	24.3	39.6	54.9	60.3	62.1
85°	15.3	23.4	31.5	34.2	34.2
87.5°	8.1	9.0	10.8	10.8	10.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)