

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: P312450

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-HRP-CP125-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: P312450  
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-L83050-HRP-CP125-W2A-U-3000K  
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" 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**

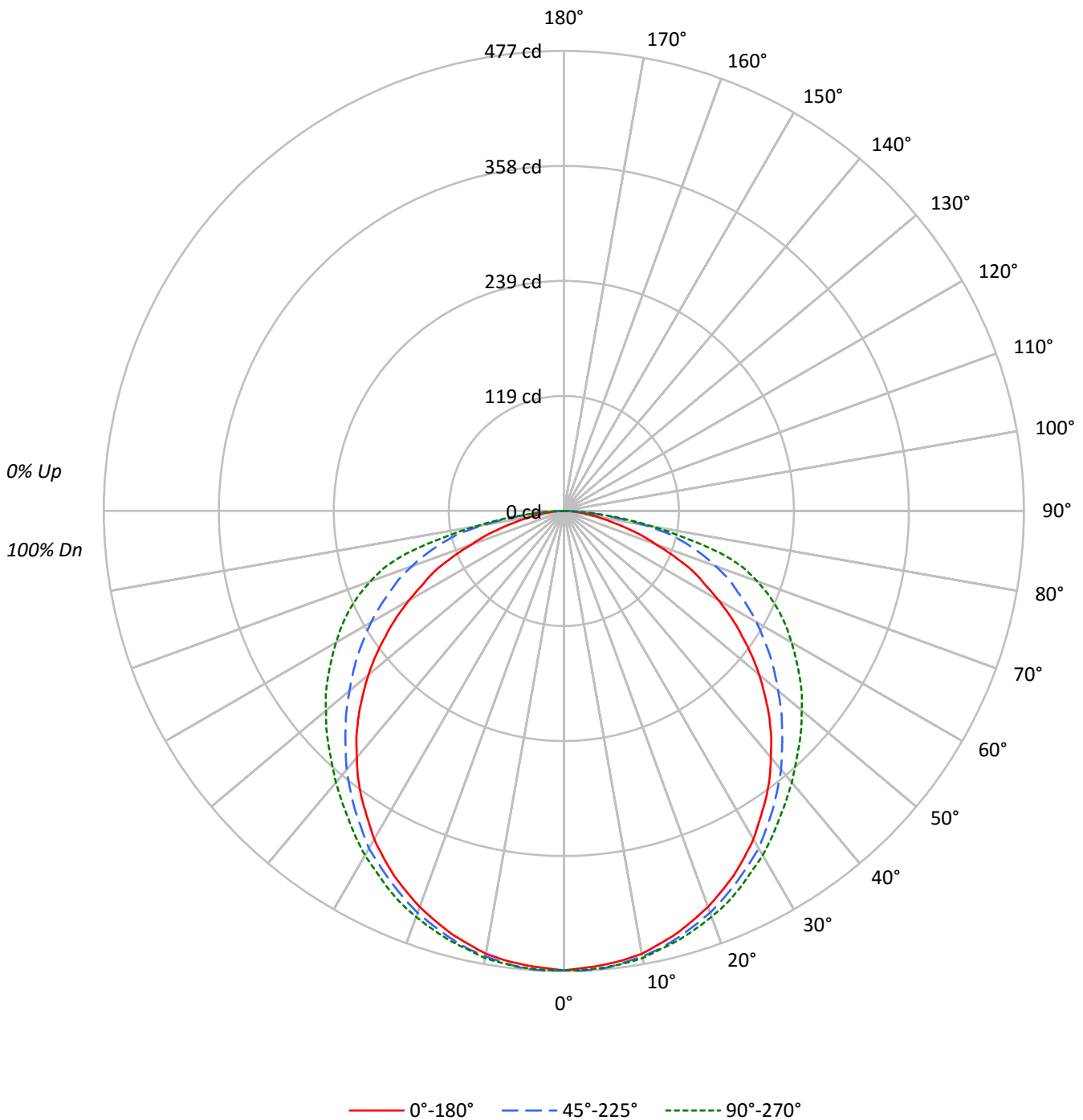
Lumens per Lamp: N/A  
Luminaire Lumens: 1446.0 lumens  
Efficiency: N/A  
Efficacy: 86.6 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.7  
Input Voltage (V): NR  
Input Current (A<sub>in</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



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### Luminous Intensity Polar Plot





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**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°	1281	1281	1281
5°	1276	1286	1284
10°	1274	1281	1286
15°	1263	1276	1283
20°	1251	1269	1283
25°	1238	1260	1281
30°	1221	1256	1281
35°	1199	1240	1280
40°	1173	1231	1291
45°	1145	1219	1312
50°	1107	1214	1348
55°	1057	1224	1399
60°	997	1242	1468
65°	941	1266	1568
70°	804	1320	1679
75°	674	1376	1745
80°	552	1328	1457
85°	479	985	1071



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.1	3.1
10°-20°	129.1	8.9
20°-30°	195.6	13.5
30°-40°	236.2	16.3
40°-50°	248.2	17.2
50°-60°	233.6	16.2
60°-70°	194.7	13.5
70°-80°	129.0	8.9
80°-90°	34.4	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°	369.9	25.6
0°-40°	606.1	41.9
0°-60°	1087.9	75.2
0°-90°	1446.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1446.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	476	476	476	476	476	
5°	472	473	476	476	475	45
15°	453	455	458	460	461	128
25°	417	420	424	430	432	192
35°	365	368	378	386	390	228
45°	301	306	320	337	345	232
55°	225	235	261	287	298	202
65°	148	160	199	232	246	144
75°	65	90	132	160	168	70
85°	16	24	32	35	35	18
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	476.2	476.2	476.2	476.2	476.2
2.5°	474.3	475.2	477.1	477.1	476.2
5°	472.5	473.4	476.2	476.2	475.2
7.5°	469.8	470.7	472.5	474.3	473.4
10°	466.1	467.0	468.9	470.7	470.7
12.5°	459.7	460.6	464.3	465.2	465.2
15°	453.3	455.2	457.9	459.7	460.6
17.5°	445.1	447.0	450.6	454.3	454.3
20°	436.9	438.8	443.3	447.0	447.9
22.5°	426.9	429.6	434.2	438.8	440.6
25°	416.9	419.6	424.2	429.6	431.5
27.5°	405.0	407.7	414.1	420.5	421.4
30°	393.1	395.9	404.1	409.6	412.3
32.5°	378.5	382.2	390.4	398.6	401.4
35°	364.9	368.5	377.6	385.8	389.5
37.5°	350.3	353.9	364.0	374.0	378.5
40°	333.9	338.4	350.3	361.2	367.6
42.5°	318.3	322.9	334.8	349.4	355.7
45°	301.0	305.6	320.2	336.6	344.8
47.5°	282.8	288.2	305.6	325.6	333.9
50°	264.5	270.9	290.1	312.9	322.0
52.5°	245.4	253.6	275.5	300.1	311.0
55°	225.3	235.3	260.9	287.3	298.3
57.5°	206.1	215.3	245.4	273.7	285.5
60°	185.2	197.0	230.8	260.0	272.7
62.5°	165.1	177.9	215.3	246.3	260.0
65°	147.8	160.5	198.9	231.7	246.3
67.5°	125.0	142.3	185.2	216.2	230.8
70°	102.2	125.9	167.8	199.8	213.4
72.5°	84.8	107.6	150.5	182.4	195.2
75°	64.8	90.3	132.3	159.6	167.8
77.5°	48.3	74.8	113.1	126.8	127.7
80°	35.6	57.5	85.7	90.3	94.0
82.5°	24.6	40.1	55.6	61.1	62.9
85°	15.5	23.7	31.9	34.7	34.7
87.5°	8.2	9.1	10.9	10.9	10.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)