

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: P313003

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-S-CP125-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: P313003
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-39HE-UNV-L83050-S-CP125-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (168) 4500K 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: 3874.0 lumens
Efficiency: N/A
Efficacy: 113.9 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

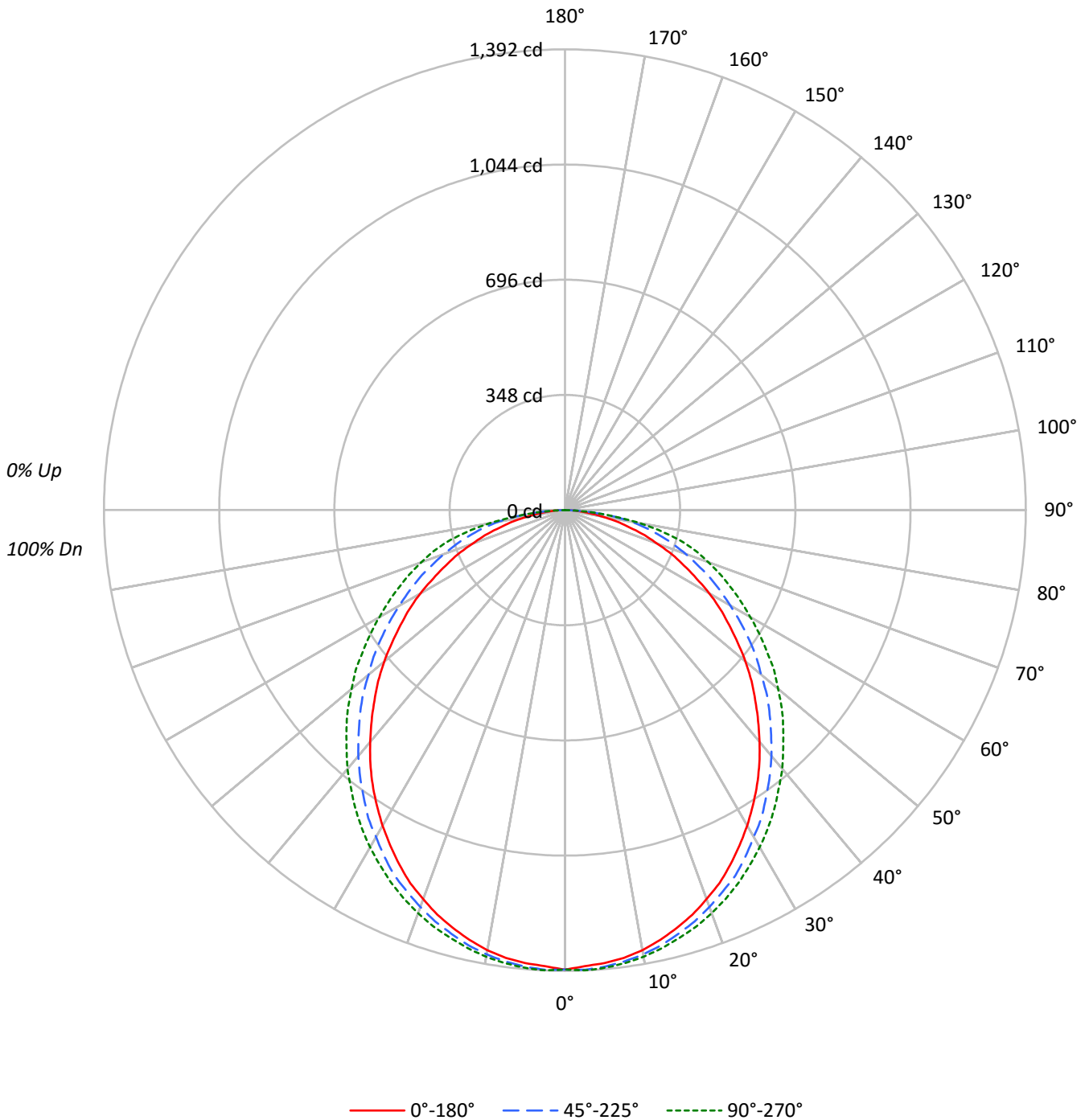
Input Watts (W): 34
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3736	3736	3736
5°	3711	3740	3750
10°	3689	3724	3744
15°	3641	3691	3726
20°	3582	3654	3711
25°	3510	3617	3687
30°	3420	3544	3656
35°	3325	3480	3622
40°	3213	3410	3587
45°	3095	3329	3550
50°	2982	3239	3519
55°	2841	3180	3494
60°	2714	3103	3483
65°	2532	3084	3522
70°	2332	3057	3626
75°	2104	3100	3815
80°	1821	3194	3586
85°	1507	2680	2680



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.3	3.4
10°-20°	373.6	9.6
20°-30°	559.0	14.4
30°-40°	662.0	17.1
40°-50°	674.6	17.4
50°-60°	604.7	15.6
60°-70°	473.4	12.2
70°-80°	305.3	7.9
80°-90°	90.2	2.3
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°	1063.9	27.5
0°-40°	1725.8	44.5
0°-60°	3005.1	77.6
0°-90°	3874.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3874.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1388	1388	1388	1388	1388	
5°	1374	1377	1385	1386	1388	130
15°	1307	1314	1325	1336	1338	368
25°	1182	1193	1218	1234	1242	544
35°	1012	1025	1059	1092	1103	633
45°	813	832	875	920	933	628
55°	606	625	678	725	745	543
65°	398	421	484	531	553	395
75°	202	233	298	349	367	217
85°	49	67	87	87	87	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1388.2	1388.2	1388.2	1388.2	1388.2
2.5°	1379.1	1382.8	1390.0	1391.8	1391.8
5°	1373.7	1377.3	1384.6	1386.4	1388.2
7.5°	1364.7	1366.5	1375.5	1379.1	1380.9
10°	1350.2	1353.8	1362.9	1368.3	1370.1
12.5°	1330.3	1335.8	1346.6	1353.8	1355.6
15°	1306.8	1314.1	1324.9	1335.8	1337.6
17.5°	1281.5	1288.8	1303.2	1315.9	1319.5
20°	1250.8	1259.8	1276.1	1290.6	1296.0
22.5°	1220.1	1227.3	1247.2	1265.3	1270.7
25°	1182.1	1193.0	1218.3	1234.5	1241.8
27.5°	1142.4	1155.0	1180.3	1202.0	1209.2
30°	1100.8	1113.4	1140.5	1167.7	1176.7
32.5°	1057.4	1071.9	1104.4	1131.5	1140.5
35°	1012.2	1024.9	1059.2	1091.7	1102.6
37.5°	965.2	976.1	1015.8	1050.2	1061.0
40°	914.6	929.1	970.6	1010.4	1021.2
42.5°	864.0	880.3	921.8	965.2	976.1
45°	813.4	831.5	874.8	920.0	932.7
47.5°	764.6	779.0	827.8	871.2	889.3
50°	712.2	726.6	773.6	822.4	840.5
52.5°	657.9	677.8	728.4	775.4	797.1
55°	605.5	625.4	677.8	724.8	744.7
57.5°	556.7	573.0	627.2	676.0	695.9
60°	504.3	518.8	576.6	629.0	647.1
62.5°	448.3	470.0	529.6	578.4	600.1
65°	397.7	421.2	484.4	531.4	553.1
67.5°	350.7	372.3	433.8	484.4	507.9
70°	296.4	325.4	388.6	439.2	460.9
72.5°	253.1	278.4	343.4	394.0	417.5
75°	202.4	233.2	298.2	348.9	366.9
77.5°	160.9	191.6	253.1	292.8	301.9
80°	117.5	148.2	206.1	225.9	231.4
82.5°	79.5	108.5	148.2	153.6	155.4
85°	48.8	66.9	86.8	86.8	86.8
87.5°	23.5	27.1	30.7	28.9	28.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)