

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: P313031

Luminaire Tested: **22FCZ2-44HE-UNV-L83050-S-CP187-W2A-U-3500K**

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: P313031
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: 22FCZ2-44HE-UNV-L83050-S-CP187-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB SHEET
Light Source: (168) 3500K 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: 3926.9 lumens
Efficiency: N/A
Efficacy: 105.6 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

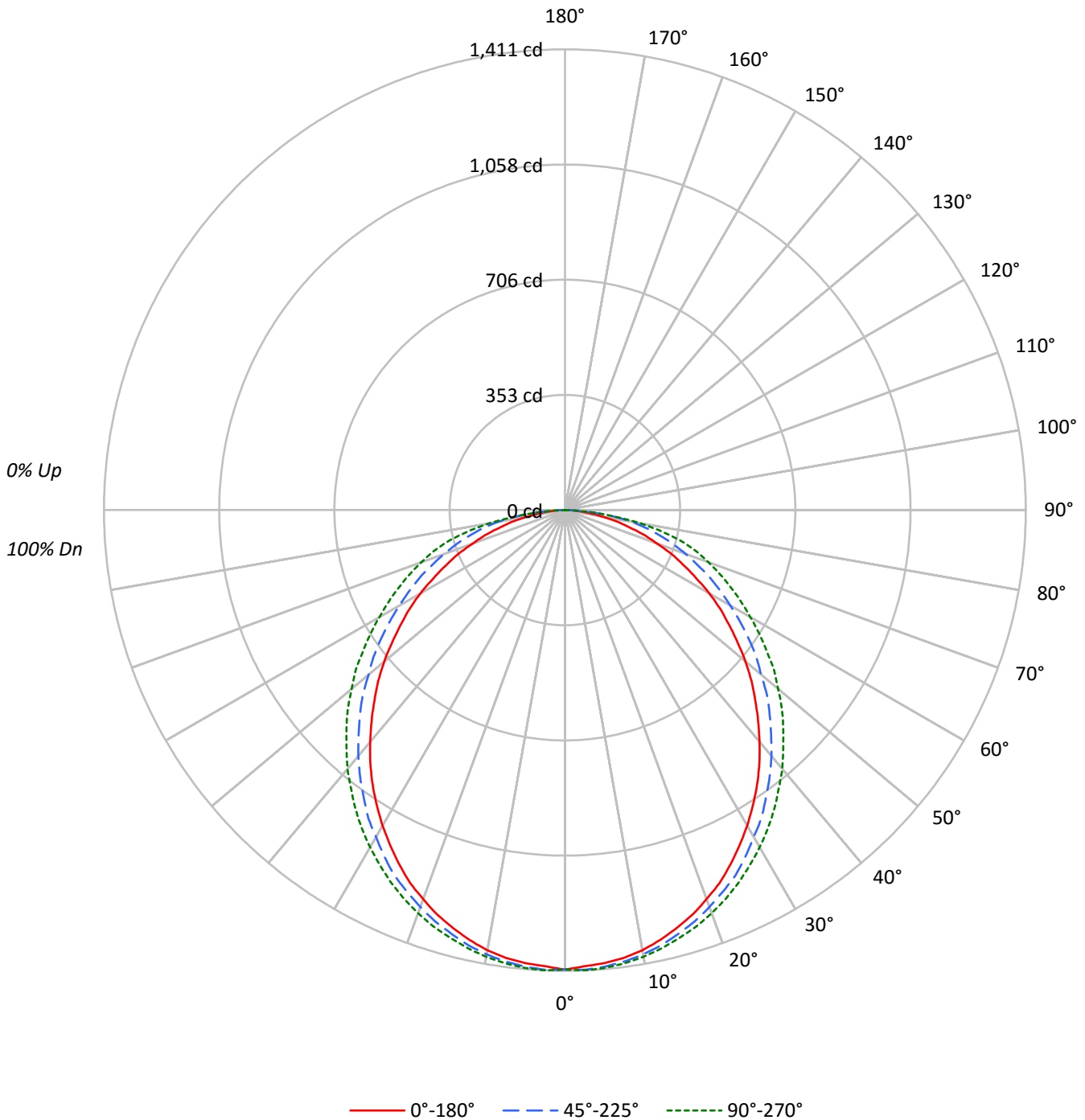
Input Watts (W): 37.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P313031

CATALOG NUMBER: 22FCZ2-44HE-UNV-L83050-S-CP187-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P313031

CATALOG NUMBER: 22FCZ2-44HE-UNV-L83050-S-CP187-W2A-U-3500K

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°	3787	3787	3787
5°	3762	3791	3801
10°	3740	3775	3795
15°	3690	3741	3777
20°	3631	3704	3762
25°	3558	3667	3738
30°	3467	3592	3706
35°	3371	3527	3672
40°	3257	3456	3636
45°	3138	3375	3598
50°	3022	3283	3567
55°	2880	3224	3542
60°	2751	3146	3530
65°	2567	3126	3570
70°	2364	3099	3676
75°	2133	3143	3867
80°	1846	3237	3634
85°	1528	2714	2714



TEST NUMBER: P313031

CATALOG NUMBER: 22FCZ2-44HE-UNV-L83050-S-CP187-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.1	3.4
10°-20°	378.7	9.6
20°-30°	566.6	14.4
30°-40°	671.0	17.1
40°-50°	683.9	17.4
50°-60°	612.9	15.6
60°-70°	479.9	12.2
70°-80°	309.4	7.9
80°-90°	91.4	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°	1078.4	27.5
0°-40°	1749.4	44.5
0°-60°	3046.3	77.6
0°-90°	3926.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3926.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1407	1407	1407	1407	1407	
5°	1392	1396	1404	1405	1407	132
15°	1325	1332	1343	1354	1356	373
25°	1198	1209	1235	1251	1259	552
35°	1026	1039	1074	1107	1118	641
45°	824	843	887	933	945	637
55°	614	634	687	735	755	550
65°	403	427	491	539	561	400
75°	205	236	302	354	372	220
85°	50	68	88	88	88	58
90°	0	0	0	0	0	



TEST NUMBER: P313031

CATALOG NUMBER: 22FCZ2-44HE-UNV-L83050-S-CP187-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1407.2	1407.2	1407.2	1407.2	1407.2
2.5°	1398.0	1401.7	1409.0	1410.8	1410.8
5°	1392.5	1396.2	1403.5	1405.3	1407.2
7.5°	1383.3	1385.2	1394.3	1398.0	1399.8
10°	1368.7	1372.4	1381.5	1387.0	1388.8
12.5°	1348.5	1354.0	1365.0	1372.4	1374.2
15°	1324.7	1332.0	1343.0	1354.0	1355.9
17.5°	1299.1	1306.4	1321.1	1333.9	1337.5
20°	1267.9	1277.1	1293.6	1308.2	1313.7
22.5°	1236.8	1244.1	1264.3	1282.6	1288.1
25°	1198.3	1209.3	1234.9	1251.4	1258.8
27.5°	1158.0	1170.8	1196.5	1218.4	1225.8
30°	1115.8	1128.7	1156.1	1183.6	1192.8
32.5°	1071.9	1086.5	1119.5	1147.0	1156.1
35°	1026.1	1038.9	1073.7	1106.7	1117.7
37.5°	978.4	989.4	1029.7	1064.5	1075.5
40°	927.1	941.8	983.9	1024.2	1035.2
42.5°	875.8	892.3	934.4	978.4	989.4
45°	824.5	842.8	886.8	932.6	945.4
47.5°	775.0	789.7	839.2	883.1	901.5
50°	721.9	736.6	784.2	833.7	852.0
52.5°	666.9	687.1	738.4	786.0	808.0
55°	613.8	634.0	687.1	734.7	754.9
57.5°	564.3	580.8	635.8	685.3	705.4
60°	511.2	525.9	584.5	637.6	655.9
62.5°	454.4	476.4	536.8	586.3	608.3
65°	403.1	426.9	491.0	538.7	560.7
67.5°	355.5	377.4	439.7	491.0	514.9
70°	300.5	329.8	393.9	445.2	467.2
72.5°	256.5	282.2	348.1	399.4	423.2
75°	205.2	236.4	302.3	353.6	371.9
77.5°	163.1	194.2	256.5	296.8	306.0
80°	119.1	150.2	208.9	229.0	234.5
82.5°	80.6	109.9	150.2	155.7	157.6
85°	49.5	67.8	87.9	87.9	87.9
87.5°	23.8	27.5	31.1	29.3	29.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)