

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: P312991

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-S-CA08-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: P312991
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-CA08-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC 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: 3741.0 lumens
Efficiency: N/A
Efficacy: 115.5 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

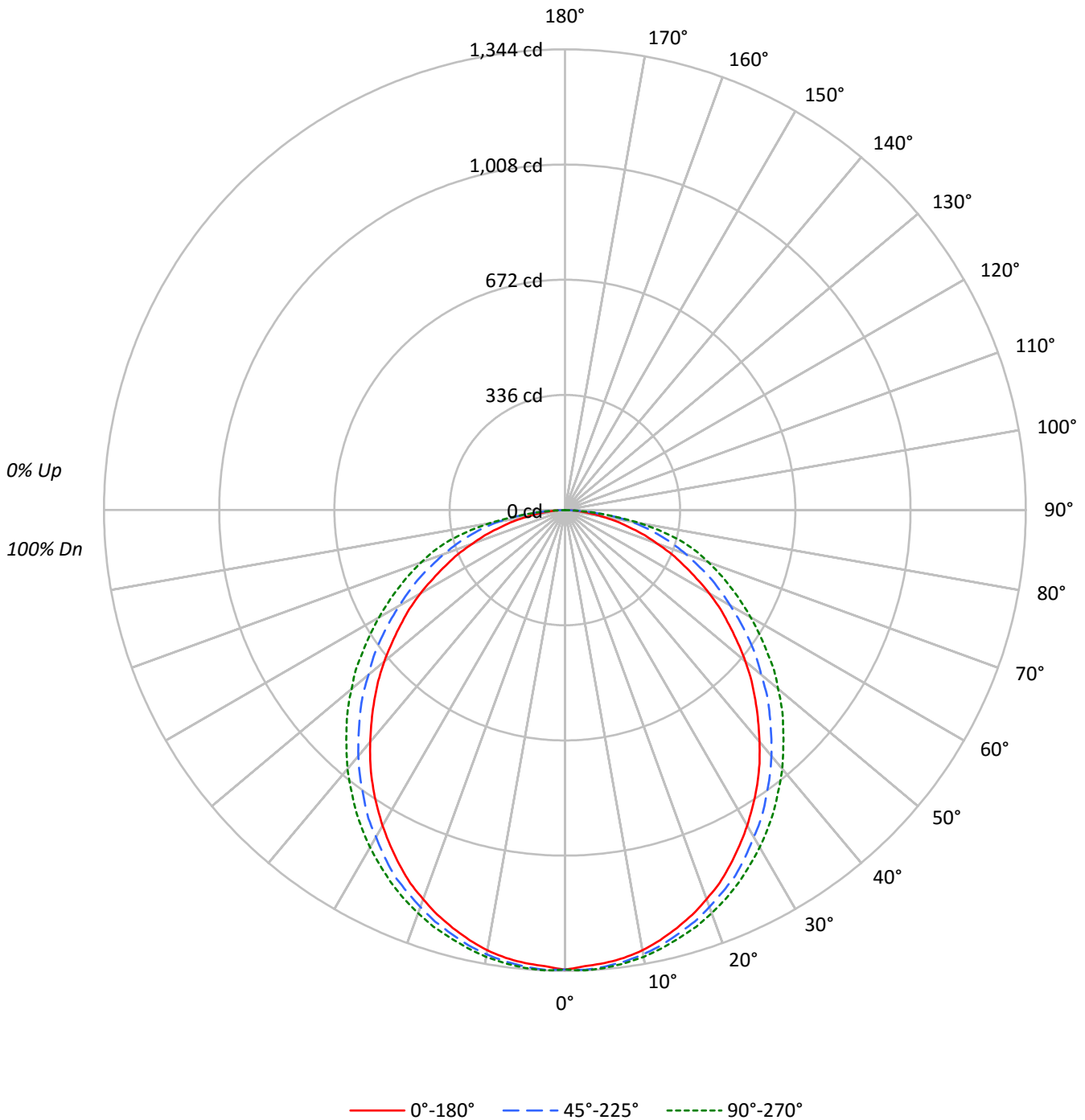
Input Watts (W): 32.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P312991

CATALOG NUMBER: 22FCZ2-39HE-UNV-L83050-S-CA08-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P312991

CATALOG NUMBER: 22FCZ2-39HE-UNV-L83050-S-CA08-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°	3607	3607	3607
5°	3583	3612	3621
10°	3563	3596	3615
15°	3516	3564	3598
20°	3459	3529	3584
25°	3389	3493	3560
30°	3303	3422	3531
35°	3211	3360	3498
40°	3103	3293	3464
45°	2989	3215	3428
50°	2879	3128	3398
55°	2743	3071	3374
60°	2621	2997	3363
65°	2445	2979	3401
70°	2253	2953	3502
75°	2033	2994	3684
80°	1759	3084	3462
85°	1454	2587	2587



TEST NUMBER: P312991

CATALOG NUMBER: 22FCZ2-39HE-UNV-L83050-S-CA08-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.8	3.4
10°-20°	360.8	9.6
20°-30°	539.8	14.4
30°-40°	639.3	17.1
40°-50°	651.5	17.4
50°-60°	583.9	15.6
60°-70°	457.2	12.2
70°-80°	294.8	7.9
80°-90°	87.1	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°	1027.3	27.5
0°-40°	1666.6	44.5
0°-60°	2902.0	77.6
0°-90°	3741.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3741.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1340	1340	1340	1340	1340	
5°	1327	1330	1337	1339	1340	126
15°	1262	1269	1279	1290	1292	356
25°	1142	1152	1176	1192	1199	525
35°	978	990	1023	1054	1065	611
45°	786	803	845	888	901	607
55°	585	604	654	700	719	524
65°	384	407	468	513	534	381
75°	196	225	288	337	354	210
85°	47	65	84	84	84	55
90°	0	0	0	0	0	



TEST NUMBER: P312991

CATALOG NUMBER: 22FCZ2-39HE-UNV-L83050-S-CA08-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1340.5	1340.5	1340.5	1340.5	1340.5
2.5°	1331.8	1335.3	1342.3	1344.0	1344.0
5°	1326.6	1330.0	1337.0	1338.8	1340.5
7.5°	1317.8	1319.6	1328.3	1331.8	1333.5
10°	1303.9	1307.4	1316.1	1321.3	1323.1
12.5°	1284.7	1289.9	1300.4	1307.4	1309.1
15°	1262.0	1269.0	1279.4	1289.9	1291.6
17.5°	1237.5	1244.5	1258.5	1270.7	1274.2
20°	1207.9	1216.6	1232.3	1246.3	1251.5
22.5°	1178.2	1185.2	1204.4	1221.8	1227.1
25°	1141.5	1152.0	1176.4	1192.2	1199.1
27.5°	1103.1	1115.4	1139.8	1160.7	1167.7
30°	1063.0	1075.2	1101.4	1127.6	1136.3
32.5°	1021.1	1035.1	1066.5	1092.7	1101.4
35°	977.5	989.7	1022.8	1054.3	1064.7
37.5°	932.1	942.6	981.0	1014.1	1024.6
40°	883.2	897.2	937.3	975.7	986.2
42.5°	834.3	850.0	890.2	932.1	942.6
45°	785.5	802.9	844.8	888.4	900.7
47.5°	738.3	752.3	799.4	841.3	858.8
50°	687.7	701.7	747.1	794.2	811.6
52.5°	635.3	654.5	703.4	748.8	769.7
55°	584.7	603.9	654.5	699.9	719.1
57.5°	537.6	553.3	605.7	652.8	672.0
60°	487.0	500.9	556.8	607.4	624.9
62.5°	432.9	453.8	511.4	558.5	579.5
65°	384.0	406.7	467.8	513.2	534.1
67.5°	338.6	359.6	418.9	467.8	490.5
70°	286.3	314.2	375.3	424.1	445.1
72.5°	244.4	268.8	331.6	380.5	403.2
75°	195.5	225.2	288.0	336.9	354.3
77.5°	155.3	185.0	244.4	282.8	291.5
80°	113.5	143.1	199.0	218.2	223.4
82.5°	76.8	104.7	143.1	148.4	150.1
85°	47.1	64.6	83.8	83.8	83.8
87.5°	22.7	26.2	29.7	27.9	27.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)