

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: P313797

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-CA125-W2A-U-4000K**

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: P313797
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-30HE-UNV-L83050-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 4000K 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: 2937.0 lumens
Efficiency: N/A
Efficacy: 136.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

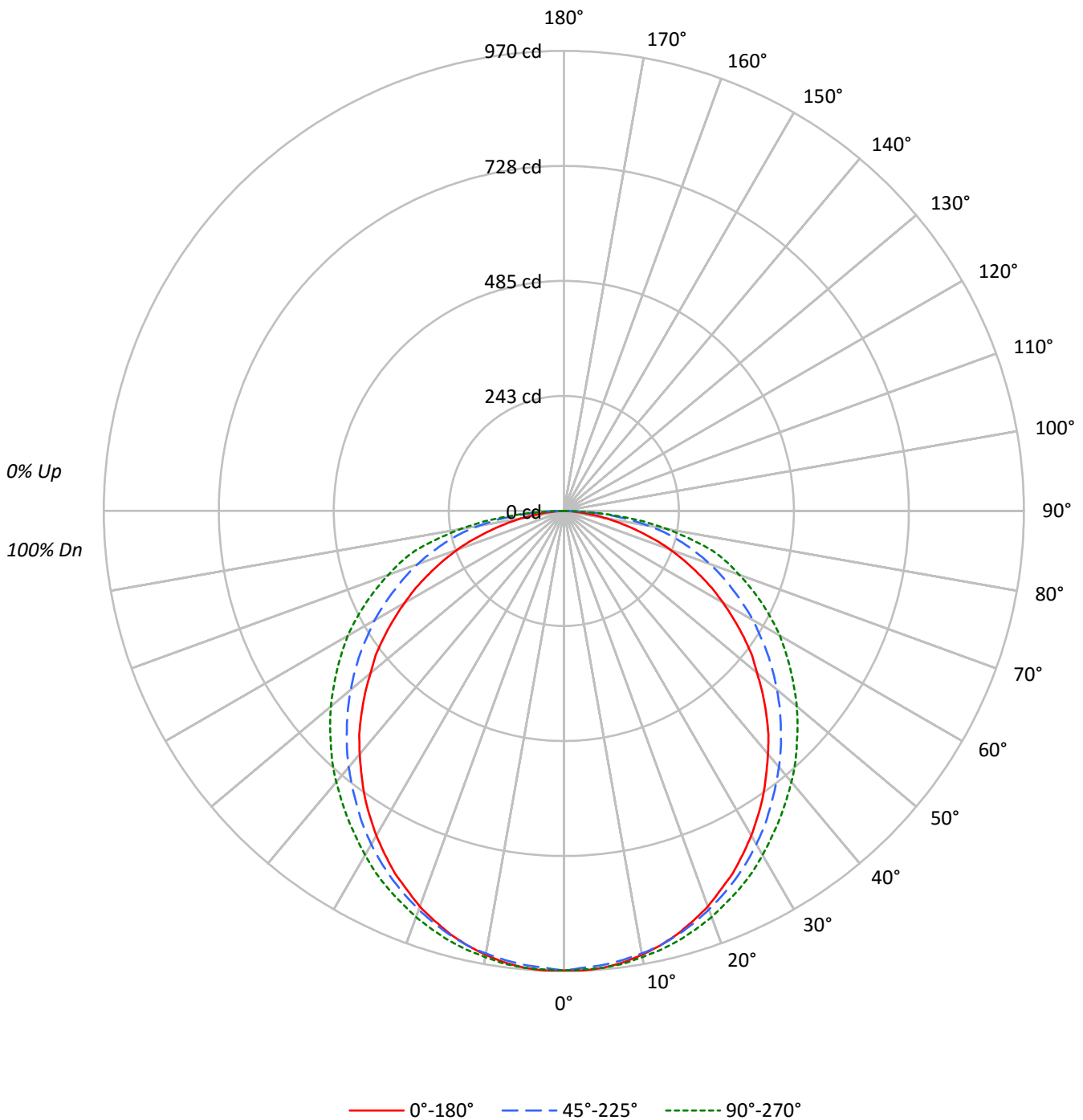
Input Watts (W): 21.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P313797

CATALOG NUMBER: 24FCZ2-30HE-UNV-L83050-CA125-W2A-U-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P313797

CATALOG NUMBER: 24FCZ2-30HE-UNV-L83050-CA125-W2A-U-4000K

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	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	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°	1303	1303	1303
5°	1306	1298	1306
10°	1298	1294	1305
15°	1287	1289	1306
20°	1271	1281	1305
25°	1251	1272	1303
30°	1228	1261	1302
35°	1204	1248	1303
40°	1176	1239	1311
45°	1148	1231	1322
50°	1114	1228	1342
55°	1086	1230	1369
60°	1044	1240	1416
65°	996	1253	1467
70°	943	1292	1549
75°	841	1347	1692
80°	717	1427	1729
85°	511	1414	1655



TEST NUMBER: P313797

CATALOG NUMBER: 24FCZ2-30HE-UNV-L83050-CA125-W2A-U-4000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.7	3.1
10°-20°	262.1	8.9
20°-30°	395.9	13.5
30°-40°	477.1	16.2
40°-50°	500.9	17.1
50°-60°	468.6	16.0
60°-70°	387.0	13.2
70°-80°	263.7	9.0
80°-90°	89.9	3.1
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°	749.7	25.5
0°-40°	1226.8	41.8
0°-60°	2196.3	74.8
0°-90°	2937.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2937.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	969	969	969	969	969	
5°	967	966	961	967	967	92
15°	924	925	926	936	937	260
25°	843	847	856	873	878	388
35°	733	741	760	785	793	458
45°	603	616	647	682	695	465
55°	463	481	524	567	584	413
65°	313	339	394	443	461	310
75°	162	199	259	308	326	172
85°	33	65	92	103	107	41
90°	0	0	0	0	0	



TEST NUMBER: P313797

CATALOG NUMBER: 24FCZ2-30HE-UNV-L83050-CA125-W2A-U-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	968.6	968.6	968.6	968.6	968.6
2.5°	969.6	968.6	963.7	968.6	967.6
5°	966.6	965.7	960.8	966.6	966.6
7.5°	959.8	959.8	955.0	961.8	962.8
10°	950.1	950.1	947.2	955.0	955.0
12.5°	938.4	938.4	938.4	946.2	947.2
15°	923.8	924.7	925.7	935.5	937.4
17.5°	906.2	908.2	911.1	922.8	924.7
20°	887.7	889.7	894.5	908.2	911.1
22.5°	864.3	869.2	876.0	891.6	894.5
25°	842.9	846.8	856.5	873.1	878.0
27.5°	816.6	822.4	835.1	852.6	859.5
30°	790.3	796.1	811.7	832.2	838.0
32.5°	762.0	770.8	787.4	808.8	815.6
35°	732.8	740.6	760.1	785.4	793.2
37.5°	700.6	711.3	732.8	760.1	769.8
40°	669.4	681.1	705.5	734.7	746.4
42.5°	638.3	650.0	677.2	710.4	722.1
45°	603.2	615.8	647.0	682.1	694.8
47.5°	568.1	583.7	617.8	654.8	668.5
50°	532.0	549.6	586.6	625.6	641.2
52.5°	499.9	516.5	555.4	597.3	612.0
55°	462.9	481.4	524.3	567.1	583.7
57.5°	424.9	445.3	491.1	537.9	554.5
60°	387.8	410.2	460.9	507.7	526.2
62.5°	351.8	374.2	426.8	475.5	494.0
65°	312.8	339.1	393.7	443.4	460.9
67.5°	275.8	304.0	361.5	410.2	427.8
70°	239.7	267.0	328.4	376.1	393.7
72.5°	200.7	231.9	293.3	343.0	361.5
75°	161.8	198.8	259.2	307.9	325.5
77.5°	125.7	163.7	224.1	264.1	272.8
80°	92.6	131.5	184.2	212.4	223.1
82.5°	59.4	98.4	140.3	160.8	169.6
85°	33.1	65.3	91.6	103.3	107.2
87.5°	13.6	28.3	37.0	41.9	41.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)