

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: P313977

Luminaire Tested: **24FCZ2-45-UNV-L83050-CP125-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: P313977
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: 24FCZ2-45-UNV-L83050-CP125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (168) 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: 4251.0 lumens
Efficiency: N/A
Efficacy: 110.4 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

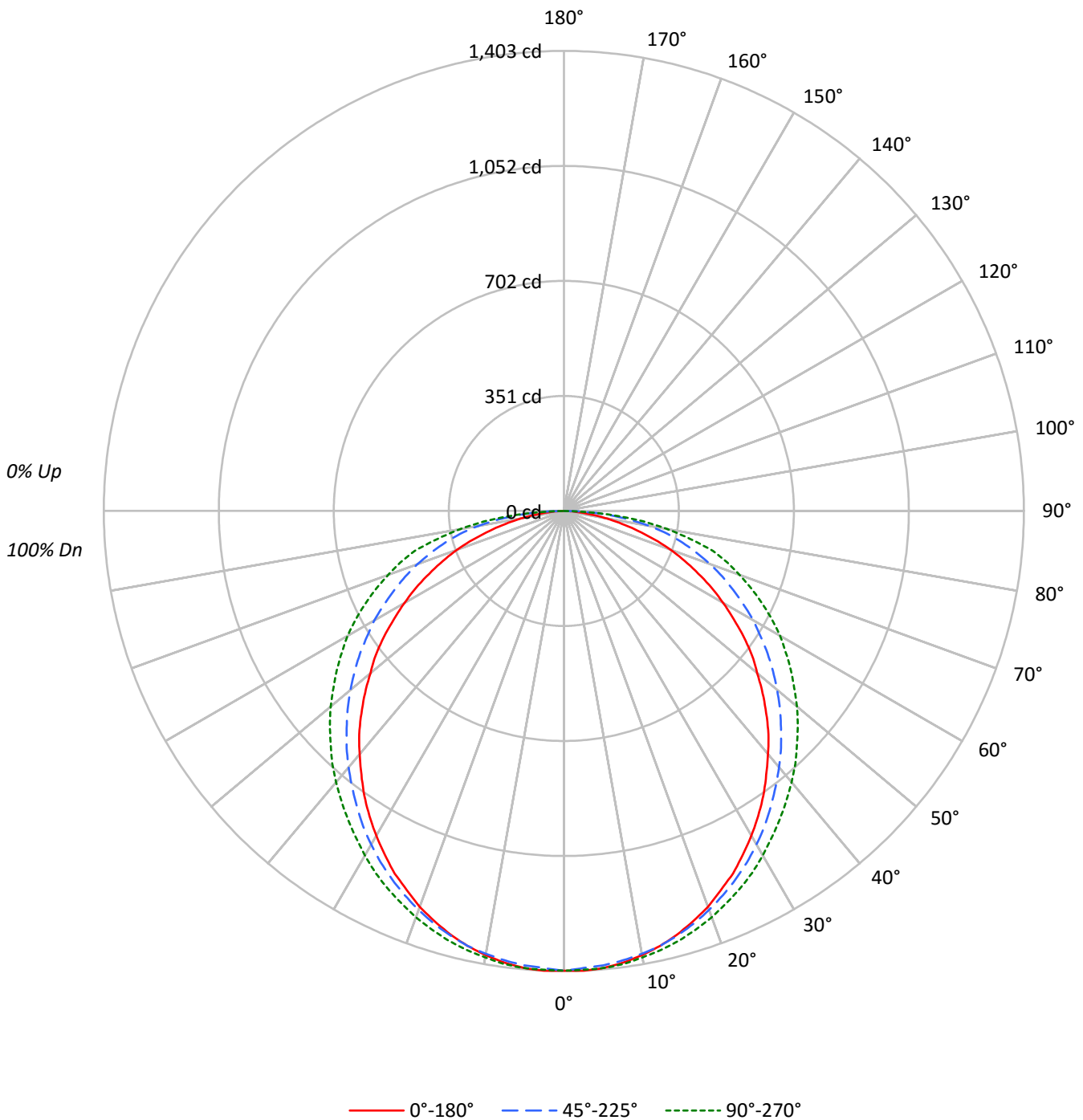
Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P313977

CATALOG NUMBER: 24FCZ2-45-UNV-L83050-CP125-W2A-U-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P313977

CATALOG NUMBER: 24FCZ2-45-UNV-L83050-CP125-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°	1886	1886	1886
5°	1890	1878	1890
10°	1879	1873	1888
15°	1863	1866	1890
20°	1840	1854	1888
25°	1811	1840	1887
30°	1777	1825	1884
35°	1742	1807	1886
40°	1702	1793	1898
45°	1661	1782	1913
50°	1612	1777	1942
55°	1571	1780	1982
60°	1510	1795	2049
65°	1441	1814	2124
70°	1365	1870	2242
75°	1217	1951	2449
80°	1038	2066	2503
85°	741	2047	2394



TEST NUMBER: P313977

CATALOG NUMBER: 24FCZ2-45-UNV-L83050-CP125-W2A-U-4000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.7	3.1
10°-20°	379.4	8.9
20°-30°	573.0	13.5
30°-40°	690.6	16.2
40°-50°	725.0	17.1
50°-60°	678.3	16.0
60°-70°	560.1	13.2
70°-80°	381.7	9.0
80°-90°	130.2	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°	1085.1	25.5
0°-40°	1775.7	41.8
0°-60°	3179.0	74.8
0°-90°	4251.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4251.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1402	1402	1402	1402	1402	
5°	1399	1398	1391	1399	1399	133
15°	1337	1338	1340	1354	1357	377
25°	1220	1226	1240	1264	1271	561
35°	1061	1072	1100	1137	1148	663
45°	873	891	936	987	1006	673
55°	670	697	759	821	845	598
65°	453	491	570	642	667	449
75°	234	288	375	446	471	250
85°	48	94	133	150	155	60
90°	0	0	0	0	0	



TEST NUMBER: P313977

CATALOG NUMBER: 24FCZ2-45-UNV-L83050-CP125-W2A-U-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1401.9	1401.9	1401.9	1401.9	1401.9
2.5°	1403.4	1401.9	1394.9	1401.9	1400.5
5°	1399.1	1397.7	1390.7	1399.1	1399.1
7.5°	1389.2	1389.2	1382.2	1392.1	1393.5
10°	1375.1	1375.1	1370.9	1382.2	1382.2
12.5°	1358.2	1358.2	1358.2	1369.5	1370.9
15°	1337.1	1338.5	1339.9	1354.0	1356.8
17.5°	1311.7	1314.5	1318.7	1335.7	1338.5
20°	1284.9	1287.7	1294.8	1314.5	1318.7
22.5°	1251.0	1258.1	1268.0	1290.5	1294.8
25°	1220.0	1225.6	1239.7	1263.7	1270.8
27.5°	1181.9	1190.4	1208.7	1234.1	1244.0
30°	1143.8	1152.3	1174.9	1204.5	1212.9
32.5°	1102.9	1115.6	1139.6	1170.6	1180.5
35°	1060.6	1071.9	1100.1	1136.8	1148.1
37.5°	1014.1	1029.6	1060.6	1100.1	1114.2
40°	968.9	985.9	1021.1	1063.4	1080.4
42.5°	923.8	940.7	980.2	1028.2	1045.1
45°	873.0	891.4	936.5	987.3	1005.6
47.5°	822.3	844.8	894.2	947.8	967.5
50°	770.1	795.5	849.1	905.5	928.0
52.5°	723.5	747.5	803.9	864.6	885.7
55°	669.9	696.7	758.8	820.9	844.8
57.5°	614.9	644.6	710.8	778.5	802.5
60°	561.3	593.8	667.1	734.8	761.6
62.5°	509.2	541.6	617.8	688.3	715.1
65°	452.7	490.8	569.8	641.7	667.1
67.5°	399.1	440.0	523.3	593.8	619.2
70°	347.0	386.5	475.3	544.4	569.8
72.5°	290.5	335.7	424.5	496.5	523.3
75°	234.1	287.7	375.2	445.7	471.1
77.5°	181.9	236.9	324.4	382.2	394.9
80°	134.0	190.4	266.6	307.5	323.0
82.5°	86.0	142.5	203.1	232.7	245.4
85°	48.0	94.5	132.6	149.5	155.1
87.5°	19.7	40.9	53.6	60.6	60.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)