

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: P313222

Luminaire Tested: **24FCZ2-45-UNV-L83050-HRP-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: P313222
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
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-HRP-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC 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: 3368.0 lumens
Efficiency: N/A
Efficacy: 87.5 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

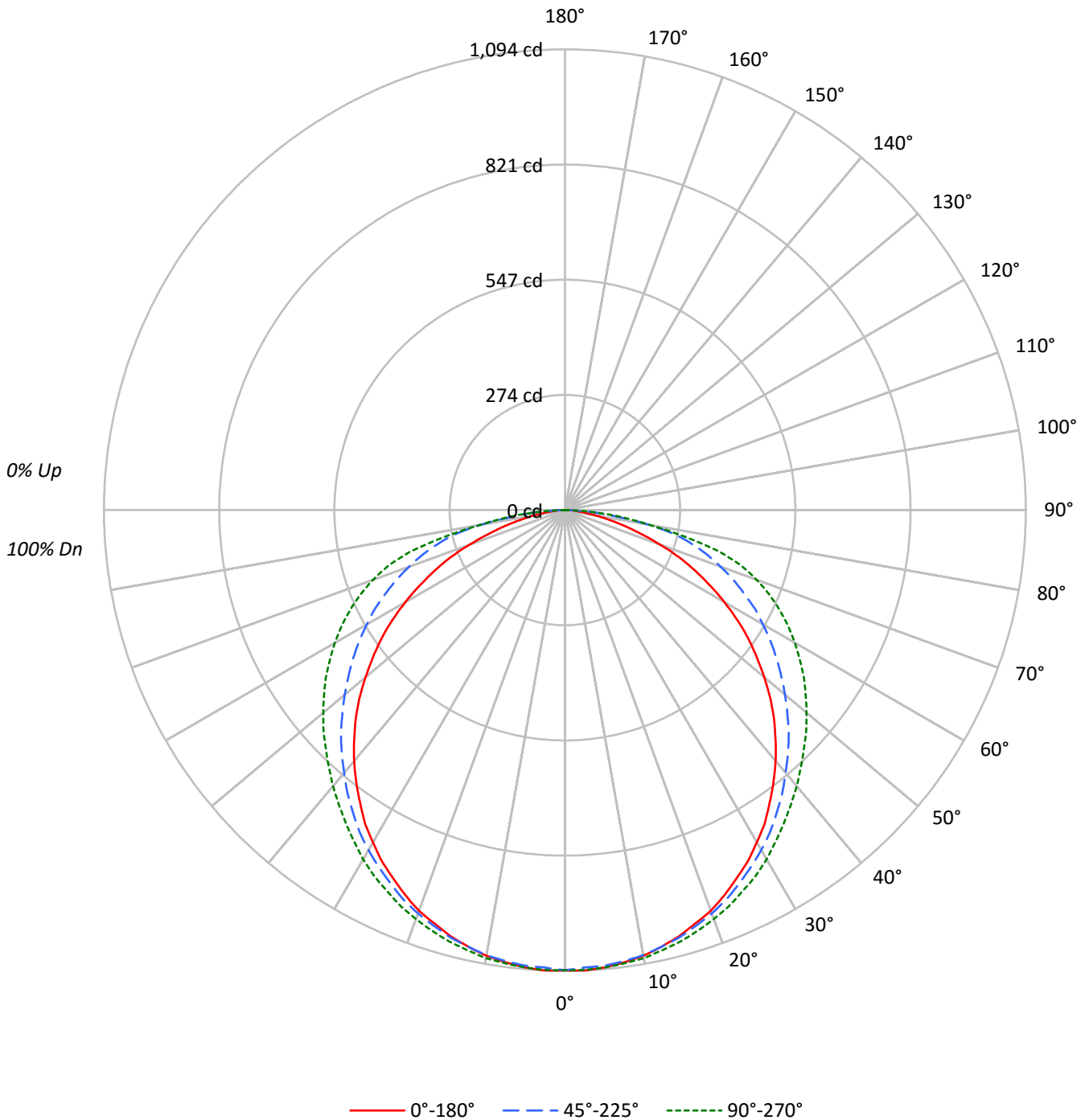
Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P313222

CATALOG NUMBER: 24FCZ2-45-UNV-L83050-HRP-CA125-W2A-U-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P313222

CATALOG NUMBER: 24FCZ2-45-UNV-L83050-HRP-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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	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	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1470	1470	1470
5°	1472	1466	1472
10°	1468	1466	1476
15°	1459	1463	1477
20°	1450	1460	1480
25°	1432	1453	1482
30°	1415	1448	1487
35°	1392	1441	1489
40°	1367	1431	1503
45°	1336	1430	1527
50°	1293	1428	1567
55°	1247	1439	1624
60°	1176	1461	1696
65°	1086	1495	1791
70°	948	1548	1908
75°	770	1627	1972
80°	568	1595	1595
85°	435	1175	1328



TEST NUMBER: P313222

CATALOG NUMBER: 24FCZ2-45-UNV-L83050-HRP-CA125-W2A-U-4000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.5	3.1
10°-20°	297.3	8.8
20°-30°	452.5	13.4
30°-40°	549.5	16.3
40°-50°	580.6	17.2
50°-60°	547.8	16.3
60°-70°	455.5	13.5
70°-80°	299.7	8.9
80°-90°	81.7	2.4
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°	853.3	25.3
0°-40°	1402.8	41.7
0°-60°	2531.2	75.2
0°-90°	3368.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3368.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1093	1093	1093	1093	1093	
5°	1090	1090	1086	1090	1090	104
15°	1048	1049	1050	1060	1060	295
25°	964	970	978	996	998	445
35°	847	857	877	900	907	530
45°	702	716	752	788	802	541
55°	532	554	613	671	692	473
65°	341	381	470	539	563	337
75°	148	216	313	371	379	160
85°	28	62	76	85	86	35
90°	0	0	0	0	0	



TEST NUMBER: P313222

CATALOG NUMBER: 24FC22-45-UNV-L83050-HRP-CA125-W2A-U-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1092.8	1092.8	1092.8	1092.8	1092.8
2.5°	1094.2	1092.8	1087.1	1092.8	1092.8
5°	1089.9	1089.9	1085.7	1089.9	1089.9
7.5°	1082.9	1082.9	1080.1	1085.7	1085.7
10°	1074.4	1074.4	1073.0	1080.1	1080.1
12.5°	1061.7	1063.1	1061.7	1070.2	1070.2
15°	1047.6	1049.0	1050.5	1060.3	1060.3
17.5°	1029.3	1032.1	1034.9	1046.2	1047.6
20°	1012.4	1013.8	1019.4	1032.1	1033.5
22.5°	989.8	994.1	1001.1	1013.8	1018.0
25°	964.4	970.1	978.5	995.5	998.3
27.5°	940.5	944.7	956.0	974.3	980.0
30°	910.9	917.9	932.0	950.3	957.4
32.5°	882.7	889.7	906.6	926.4	932.0
35°	847.4	857.3	877.0	899.6	906.6
37.5°	813.6	823.4	847.4	872.8	881.3
40°	778.3	789.6	815.0	844.6	855.9
42.5°	740.3	755.8	784.0	816.4	829.1
45°	702.2	716.3	751.5	788.2	802.3
47.5°	661.3	678.2	716.3	760.0	776.9
50°	617.6	638.7	682.4	730.4	748.7
52.5°	573.9	597.8	647.2	700.8	720.5
55°	531.6	554.1	613.4	671.2	692.3
57.5°	485.0	513.2	578.1	640.1	661.3
60°	437.1	468.1	542.9	607.7	630.3
62.5°	389.2	424.4	509.0	573.9	597.8
65°	341.2	380.7	469.5	538.6	562.6
67.5°	294.7	338.4	432.9	502.0	525.9
70°	241.1	296.1	393.4	461.1	485.0
72.5°	191.8	255.2	355.3	418.8	439.9
75°	148.1	215.7	313.0	370.8	379.3
77.5°	108.6	176.3	269.3	289.1	290.5
80°	73.3	141.0	205.9	203.0	205.9
82.5°	47.9	105.8	129.7	145.2	146.6
85°	28.2	62.0	76.1	84.6	86.0
87.5°	14.1	21.2	26.8	28.2	31.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)