

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: P310139

Luminaire Tested: **24FCZ2-45-UNV-L82765-RDP-CA125-W2A-U-2700K**

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: P310139
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
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-L82765-RDP-CA125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (168) 2700K 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: 2548.0 lumens
Efficiency: N/A
Efficacy: 67.8 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

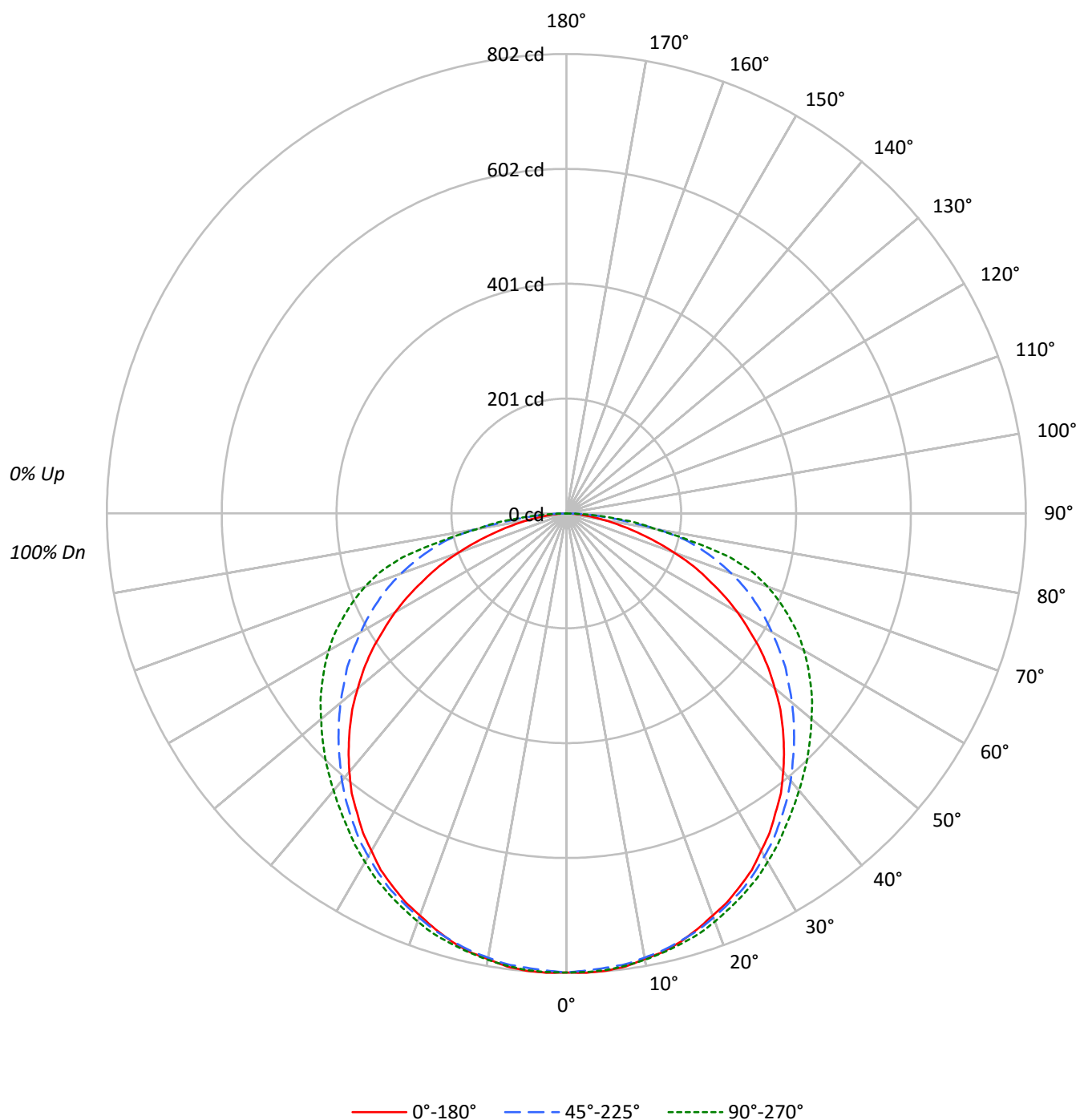
Input Watts (W): 37.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310139

CATALOG NUMBER: 24FCZ2-45-UNV-L82765-RDP-CA125-W2A-U-2700K

Luminous Intensity Polar Plot





TEST NUMBER: P310139

CATALOG NUMBER: 24FCZ2-45-UNV-L82765-RDP-CA125-W2A-U-2700K

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1078	1078	1078
5°	1082	1075	1081
10°	1079	1076	1081
15°	1077	1076	1083
20°	1069	1075	1086
25°	1066	1077	1088
30°	1056	1074	1092
35°	1046	1071	1096
40°	1034	1070	1110
45°	1017	1070	1135
50°	995	1077	1169
55°	970	1094	1221
60°	928	1115	1289
65°	869	1155	1368
70°	791	1208	1472
75°	670	1275	1537
80°	528	1283	1244
85°	391	976	1093



TEST NUMBER: P310139

CATALOG NUMBER: 24FCZ2-45-UNV-L82765-RDP-CA125-W2A-U-2700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.0	3.0
10°-20°	218.8	8.6
20°-30°	334.5	13.1
30°-40°	408.9	16.0
40°-50°	435.8	17.1
50°-60°	416.7	16.4
60°-70°	353.0	13.9
70°-80°	237.3	9.3
80°-90°	66.9	2.6
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°	629.3	24.7
0°-40°	1038.2	40.7
0°-60°	1890.8	74.2
0°-90°	2548.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2548.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	801	801	801	801	801	
5°	801	800	796	800	800	76
15°	774	774	772	778	777	218
25°	718	720	725	732	733	331
35°	637	642	652	665	667	399
45°	535	544	562	586	596	412
55°	413	428	466	503	521	368
65°	273	301	363	411	430	271
75°	129	176	245	287	296	138
85°	25	52	63	68	71	31
90°	0	0	0	0	0	



TEST NUMBER: P310139

CATALOG NUMBER: 24FCZ2-45-UNV-L82765-RDP-CA125-W2A-U-2700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	801.3	801.3	801.3	801.3	801.3
2.5°	802.5	802.5	798.7	801.3	801.3
5°	801.3	800.0	796.2	800.0	800.0
7.5°	797.5	796.2	793.7	797.5	796.2
10°	789.9	789.9	787.4	791.2	791.2
12.5°	783.6	782.3	781.1	786.1	784.8
15°	773.5	773.5	772.2	778.5	777.3
17.5°	760.8	762.1	763.4	768.4	769.7
20°	746.9	749.5	750.7	758.3	758.3
22.5°	734.3	735.6	738.1	745.7	745.7
25°	717.9	720.4	725.4	731.8	733.0
27.5°	701.4	702.7	709.0	717.9	719.1
30°	679.9	683.7	691.3	701.4	702.7
32.5°	661.0	664.8	673.6	683.7	686.3
35°	637.0	642.0	652.1	664.8	667.3
37.5°	615.5	619.3	631.9	645.8	649.6
40°	588.9	596.5	609.2	625.6	631.9
42.5°	562.4	570.0	585.2	606.6	614.2
45°	534.6	543.5	562.4	586.4	596.5
47.5°	506.8	516.9	538.4	566.2	577.6
50°	475.2	487.8	514.4	546.0	558.6
52.5°	444.9	460.0	489.1	524.5	540.9
55°	413.3	428.4	466.4	503.0	520.7
57.5°	377.9	398.1	439.8	481.5	500.5
60°	345.0	364.0	414.5	460.0	479.0
62.5°	309.6	334.9	389.3	437.3	456.2
65°	273.0	300.8	362.7	410.7	429.7
67.5°	240.1	270.5	336.2	384.2	403.2
70°	201.0	238.9	307.1	355.1	374.1
72.5°	164.3	206.0	276.8	323.5	341.2
75°	128.9	175.7	245.2	286.9	295.7
77.5°	96.1	145.3	212.3	230.0	223.7
80°	68.2	116.3	165.6	156.7	160.5
82.5°	44.2	88.5	102.4	116.3	120.1
85°	25.3	51.8	63.2	68.2	70.8
87.5°	11.4	19.0	25.3	25.3	24.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)