

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: P310150

Luminaire Tested: **24FCZ2-45-UNV-L82765-RDP-CP125-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: P310150
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-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB 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: 2659.0 lumens
Efficiency: N/A
Efficacy: 70.3 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

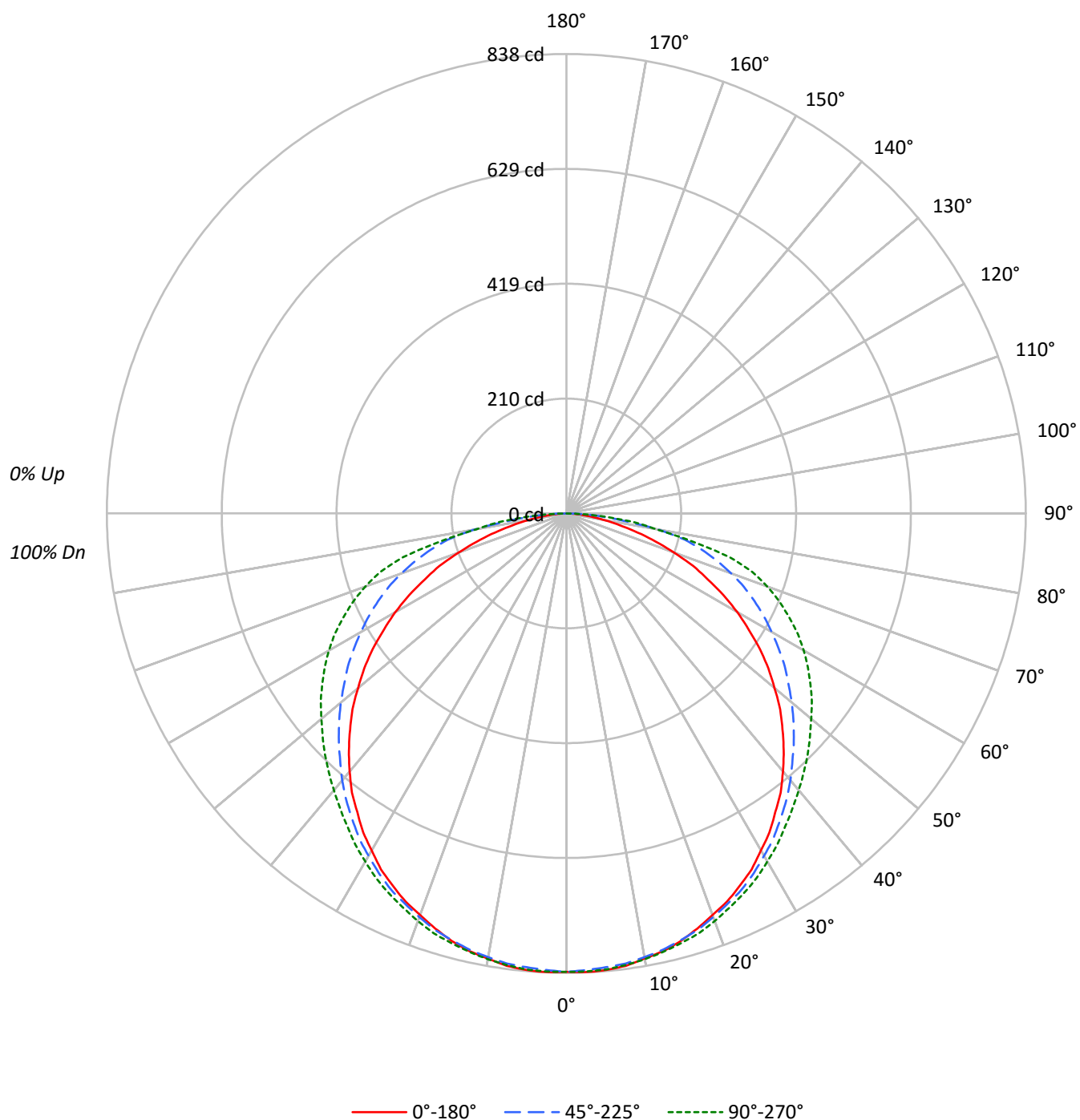
Input Watts (W): 37.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310150

CATALOG NUMBER: 24FCZ2-45-UNV-L82765-RDP-CP125-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P310150

CATALOG NUMBER: 24FCZ2-45-UNV-L82765-RDP-CP125-W2A-U-3500K

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°	1125	1125	1125
5°	1129	1122	1128
10°	1126	1123	1128
15°	1124	1122	1130
20°	1116	1122	1133
25°	1112	1124	1136
30°	1102	1121	1139
35°	1092	1118	1144
40°	1079	1117	1158
45°	1062	1117	1184
50°	1038	1124	1220
55°	1012	1142	1275
60°	969	1164	1345
65°	907	1205	1428
70°	825	1261	1536
75°	699	1330	1604
80°	552	1339	1298
85°	408	1017	1141



TEST NUMBER: P310150

CATALOG NUMBER: 24FCZ2-45-UNV-L82765-RDP-CP125-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.3	3.0
10°-20°	228.3	8.6
20°-30°	349.1	13.1
30°-40°	426.8	16.0
40°-50°	454.8	17.1
50°-60°	434.9	16.4
60°-70°	368.4	13.9
70°-80°	247.6	9.3
80°-90°	69.8	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°	656.7	24.7
0°-40°	1083.4	40.7
0°-60°	1973.2	74.2
0°-90°	2659.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2659.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	836	836	836	836	836	
5°	836	835	831	835	835	79
15°	807	807	806	812	811	228
25°	749	752	757	764	765	345
35°	665	670	680	694	696	416
45°	558	567	587	612	622	430
55°	431	447	487	525	543	384
65°	285	314	378	429	448	283
75°	134	183	256	299	309	144
85°	26	54	66	71	74	33
90°	0	0	0	0	0	



TEST NUMBER: P310150

CATALOG NUMBER: 24FCZ2-45-UNV-L82765-RDP-CP125-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	836.2	836.2	836.2	836.2	836.2
2.5°	837.5	837.5	833.5	836.2	836.2
5°	836.2	834.9	830.9	834.9	834.9
7.5°	832.2	830.9	828.3	832.2	830.9
10°	824.3	824.3	821.7	825.6	825.6
12.5°	817.7	816.4	815.1	820.4	819.0
15°	807.2	807.2	805.8	812.4	811.1
17.5°	794.0	795.3	796.6	801.9	803.2
20°	779.5	782.1	783.4	791.3	791.3
22.5°	766.3	767.6	770.2	778.1	778.1
25°	749.1	751.8	757.0	763.6	765.0
27.5°	732.0	733.3	739.9	749.1	750.5
30°	709.6	713.5	721.4	732.0	733.3
32.5°	689.8	693.7	703.0	713.5	716.2
35°	664.7	670.0	680.5	693.7	696.4
37.5°	642.3	646.3	659.4	674.0	677.9
40°	614.6	622.5	635.7	652.9	659.4
42.5°	586.9	594.8	610.6	633.1	641.0
45°	557.9	567.1	586.9	612.0	622.5
47.5°	528.9	539.4	561.8	590.9	602.7
50°	495.9	509.1	536.8	569.8	583.0
52.5°	464.3	480.1	510.4	547.3	564.5
55°	431.3	447.1	486.7	524.9	543.4
57.5°	394.3	415.5	459.0	502.5	522.3
60°	360.1	379.8	432.6	480.1	499.9
62.5°	323.1	349.5	406.2	456.3	476.1
65°	284.9	313.9	378.5	428.6	448.4
67.5°	250.6	282.2	350.8	400.9	420.7
70°	209.7	249.3	320.5	370.6	390.4
72.5°	171.5	215.0	288.8	337.6	356.1
75°	134.5	183.3	255.9	299.4	308.6
77.5°	100.2	151.7	221.6	240.0	233.4
80°	71.2	121.3	172.8	163.5	167.5
82.5°	46.2	92.3	106.8	121.3	125.3
85°	26.4	54.1	65.9	71.2	73.9
87.5°	11.9	19.8	26.4	26.4	25.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)