

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: P310261

Luminaire Tested: **24FCZ2-50-UNV-L82765-RDP-CP250-W2A-U-5000K**

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: P310261
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: 24FCZ2-50-UNV-L82765-RDP-CP250-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (168) 5000K 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: 2939.0 lumens
Efficiency: N/A
Efficacy: 67.3 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

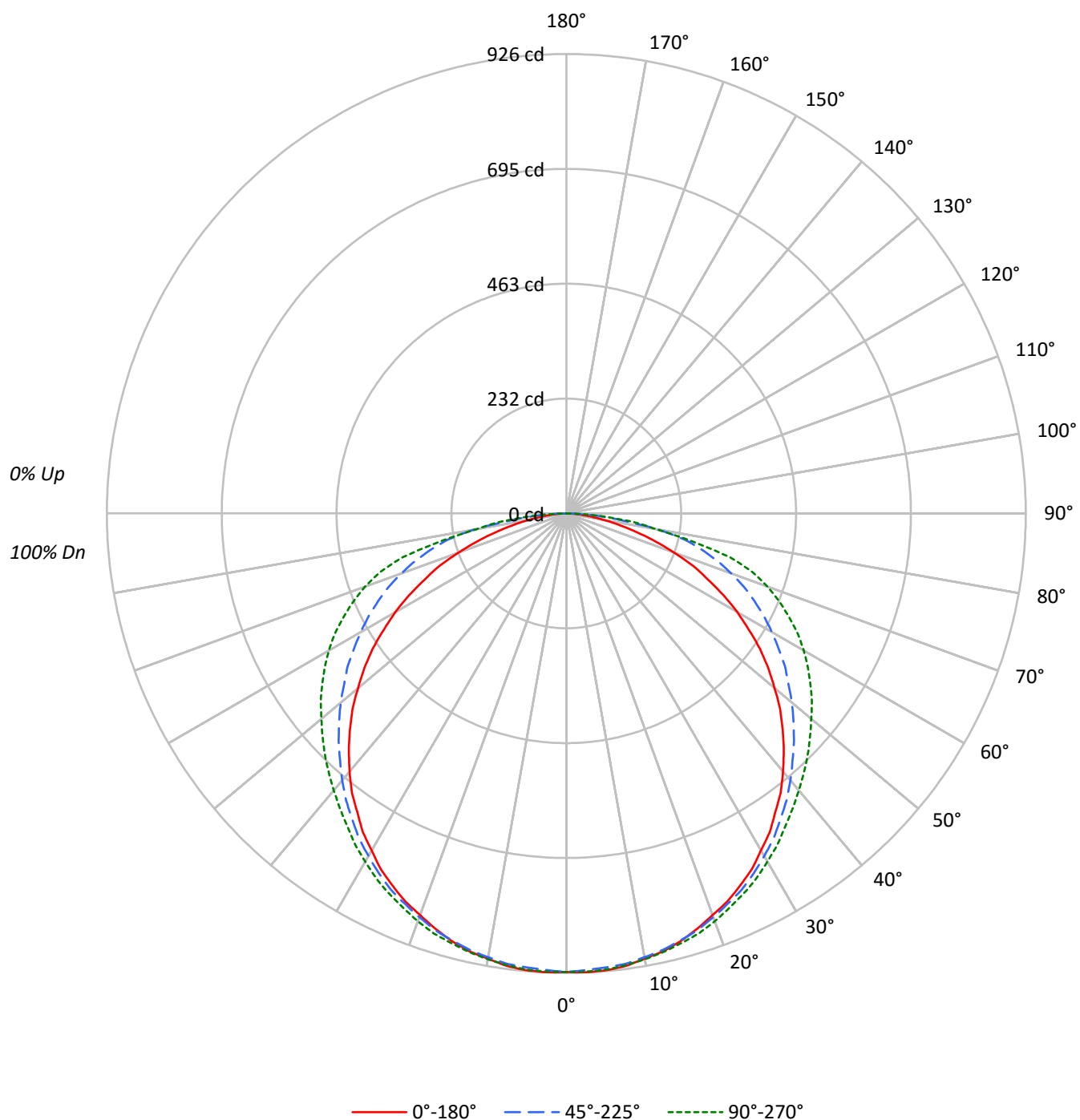
Input Watts (W): 43.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310261

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-RDP-CP250-W2A-U-5000K

Luminous Intensity Polar Plot





TEST NUMBER: P310261

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-RDP-CP250-W2A-U-5000K

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°	1244	1244	1244
5°	1248	1240	1246
10°	1245	1241	1247
15°	1243	1241	1249
20°	1234	1240	1252
25°	1229	1242	1255
30°	1219	1239	1259
35°	1207	1236	1264
40°	1193	1234	1280
45°	1173	1234	1309
50°	1147	1242	1349
55°	1118	1262	1409
60°	1071	1287	1487
65°	1003	1332	1578
70°	912	1393	1697
75°	773	1470	1773
80°	610	1480	1434
85°	451	1125	1260



TEST NUMBER: P310261

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-RDP-CP250-W2A-U-5000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.7	3.0
10°-20°	252.3	8.6
20°-30°	385.9	13.1
30°-40°	471.7	16.0
40°-50°	502.7	17.1
50°-60°	480.7	16.4
60°-70°	407.2	13.9
70°-80°	273.7	9.3
80°-90°	77.2	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°	725.8	24.7
0°-40°	1197.5	40.7
0°-60°	2180.9	74.2
0°-90°	2939.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2939.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	924	924	924	924	924	
5°	924	923	918	923	923	88
15°	892	892	891	898	896	252
25°	828	831	837	844	846	382
35°	735	741	752	767	770	460
45°	617	627	649	676	688	476
55°	477	494	538	580	601	425
65°	315	347	418	474	496	313
75°	149	203	283	331	341	159
85°	29	60	73	79	82	36
90°	0	0	0	0	0	



TEST NUMBER: P310261

CATALOG NUMBER: 24FCZ2-50-UNV-L82765-RDP-CP250-W2A-U-5000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	924.2	924.2	924.2	924.2	924.2
2.5°	925.7	925.7	921.3	924.2	924.2
5°	924.2	922.8	918.4	922.8	922.8
7.5°	919.9	918.4	915.5	919.9	918.4
10°	911.1	911.1	908.2	912.6	912.6
12.5°	903.8	902.4	900.9	906.7	905.3
15°	892.2	892.2	890.7	898.0	896.5
17.5°	877.6	879.0	880.5	886.3	887.8
20°	861.5	864.5	865.9	874.7	874.7
22.5°	847.0	848.4	851.3	860.1	860.1
25°	828.0	830.9	836.8	844.1	845.5
27.5°	809.1	810.5	817.8	828.0	829.5
30°	784.3	788.7	797.4	809.1	810.5
32.5°	762.4	766.8	777.0	788.7	791.6
35°	734.7	740.6	752.2	766.8	769.7
37.5°	709.9	714.3	728.9	744.9	749.3
40°	679.3	688.1	702.6	721.6	728.9
42.5°	648.7	657.5	675.0	699.7	708.5
45°	616.6	626.8	648.7	676.4	688.1
47.5°	584.6	596.2	621.0	653.1	666.2
50°	548.1	562.7	593.3	629.8	644.3
52.5°	513.1	530.6	564.2	605.0	623.9
55°	476.7	494.2	537.9	580.2	600.6
57.5°	435.9	459.2	507.3	555.4	577.3
60°	398.0	419.8	478.2	530.6	552.5
62.5°	357.2	386.3	449.0	504.4	526.3
65°	314.9	347.0	418.4	473.8	495.6
67.5°	277.0	312.0	387.8	443.2	465.0
70°	231.8	275.5	354.2	409.6	431.5
72.5°	189.5	237.6	319.3	373.2	393.6
75°	148.7	202.6	282.8	330.9	341.1
77.5°	110.8	167.6	244.9	265.3	258.0
80°	78.7	134.1	191.0	180.8	185.1
82.5°	51.0	102.0	118.1	134.1	138.5
85°	29.2	59.8	72.9	78.7	81.6
87.5°	13.1	21.9	29.2	29.2	27.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)