

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: P310645

Luminaire Tested: **24FCZ2-35-UNV-L82765-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: P310645  
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: 24FCZ2-35-UNV-L82765-CP125-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 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**

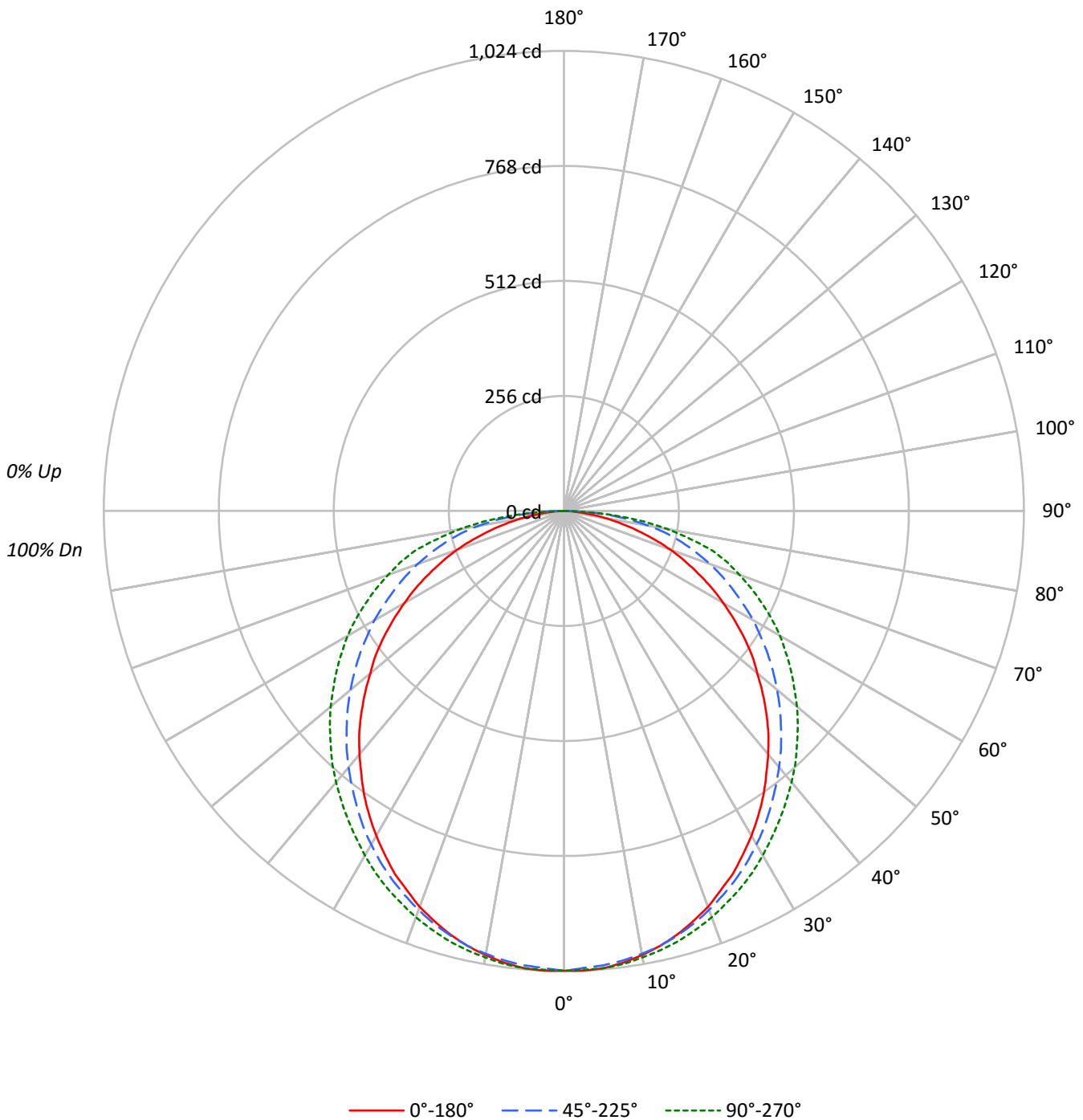
Lumens per Lamp: N/A  
Luminaire Lumens: 3103.0 lumens  
Efficiency: N/A  
Efficacy: 110.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 28.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: P310645  
CATALOG NUMBER: 24FCZ2-35-UNV-L82765-CP125-W2A-U-3500K

### Luminous Intensity Polar Plot





TEST NUMBER: P310645

CATALOG NUMBER: 24FCZ2-35-UNV-L82765-CP125-W2A-U-3500K

**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°	1377	1377	1377
5°	1379	1371	1379
10°	1371	1367	1378
15°	1360	1362	1380
20°	1343	1353	1378
25°	1322	1343	1377
30°	1297	1332	1376
35°	1272	1319	1376
40°	1242	1309	1385
45°	1213	1301	1397
50°	1177	1297	1418
55°	1147	1299	1447
60°	1102	1311	1496
65°	1052	1324	1550
70°	996	1365	1636
75°	888	1424	1788
80°	758	1508	1827
85°	540	1494	1748



TEST NUMBER: P310645

CATALOG NUMBER: 24FCZ2-35-UNV-L82765-CP125-W2A-U-3500K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.8	3.1
10°-20°	276.9	8.9
20°-30°	418.3	13.5
30°-40°	504.1	16.2
40°-50°	529.2	17.1
50°-60°	495.1	16.0
60°-70°	408.9	13.2
70°-80°	278.6	9.0
80°-90°	95.0	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°	792.0	25.5
0°-40°	1296.1	41.8
0°-60°	2320.5	74.8
0°-90°	3103.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3103.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1023	1023	1023	1023	1023	
5°	1021	1020	1015	1021	1021	97
15°	976	977	978	988	990	275
25°	890	895	905	922	928	410
35°	774	782	803	830	838	484
45°	637	651	684	721	734	491
55°	489	509	554	599	617	436
65°	330	358	416	468	487	328
75°	171	210	274	325	344	182
85°	35	69	97	109	113	44
90°	0	0	0	0	0	



TEST NUMBER: P310645

CATALOG NUMBER: 24FCZ2-35-UNV-L82765-CP125-W2A-U-3500K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1023.3	1023.3	1023.3	1023.3	1023.3
2.5°	1024.4	1023.3	1018.2	1023.3	1022.3
5°	1021.3	1020.3	1015.1	1021.3	1021.3
7.5°	1014.1	1014.1	1008.9	1016.1	1017.2
10°	1003.8	1003.8	1000.7	1008.9	1008.9
12.5°	991.4	991.4	991.4	999.7	1000.7
15°	976.0	977.0	978.0	988.3	990.4
17.5°	957.5	959.5	962.6	975.0	977.0
20°	937.9	940.0	945.1	959.5	962.6
22.5°	913.2	918.3	925.5	942.0	945.1
25°	890.5	894.7	904.9	922.4	927.6
27.5°	862.7	868.9	882.3	900.8	908.0
30°	834.9	841.1	857.6	879.2	885.4
32.5°	805.1	814.3	831.9	854.5	861.7
35°	774.2	782.4	803.0	829.8	838.0
37.5°	740.2	751.5	774.2	803.0	813.3
40°	707.3	719.6	745.4	776.3	788.6
42.5°	674.3	686.7	715.5	750.5	762.9
45°	637.3	650.7	683.6	720.7	734.0
47.5°	600.2	616.7	652.7	691.8	706.3
50°	562.1	580.6	619.8	661.0	677.4
52.5°	528.1	545.6	586.8	631.1	646.5
55°	489.0	508.6	553.9	599.2	616.7
57.5°	448.9	470.5	518.9	568.3	585.8
60°	409.7	433.4	487.0	536.4	555.9
62.5°	371.7	395.3	450.9	502.4	522.0
65°	330.5	358.3	415.9	468.4	487.0
67.5°	291.4	321.2	382.0	433.4	452.0
70°	253.3	282.1	346.9	397.4	415.9
72.5°	212.1	245.0	309.9	362.4	382.0
75°	170.9	210.0	273.9	325.3	343.9
77.5°	132.8	173.0	236.8	279.0	288.3
80°	97.8	139.0	194.6	224.4	235.8
82.5°	62.8	104.0	148.3	169.9	179.1
85°	35.0	69.0	96.8	109.1	113.2
87.5°	14.4	29.9	39.1	44.3	44.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)