

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: P311231

Luminaire Tested: **24FCZ2-30-UNV-L82765-S-CP125-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: P311231  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-30-UNV-L82765-S-CP125-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB 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**

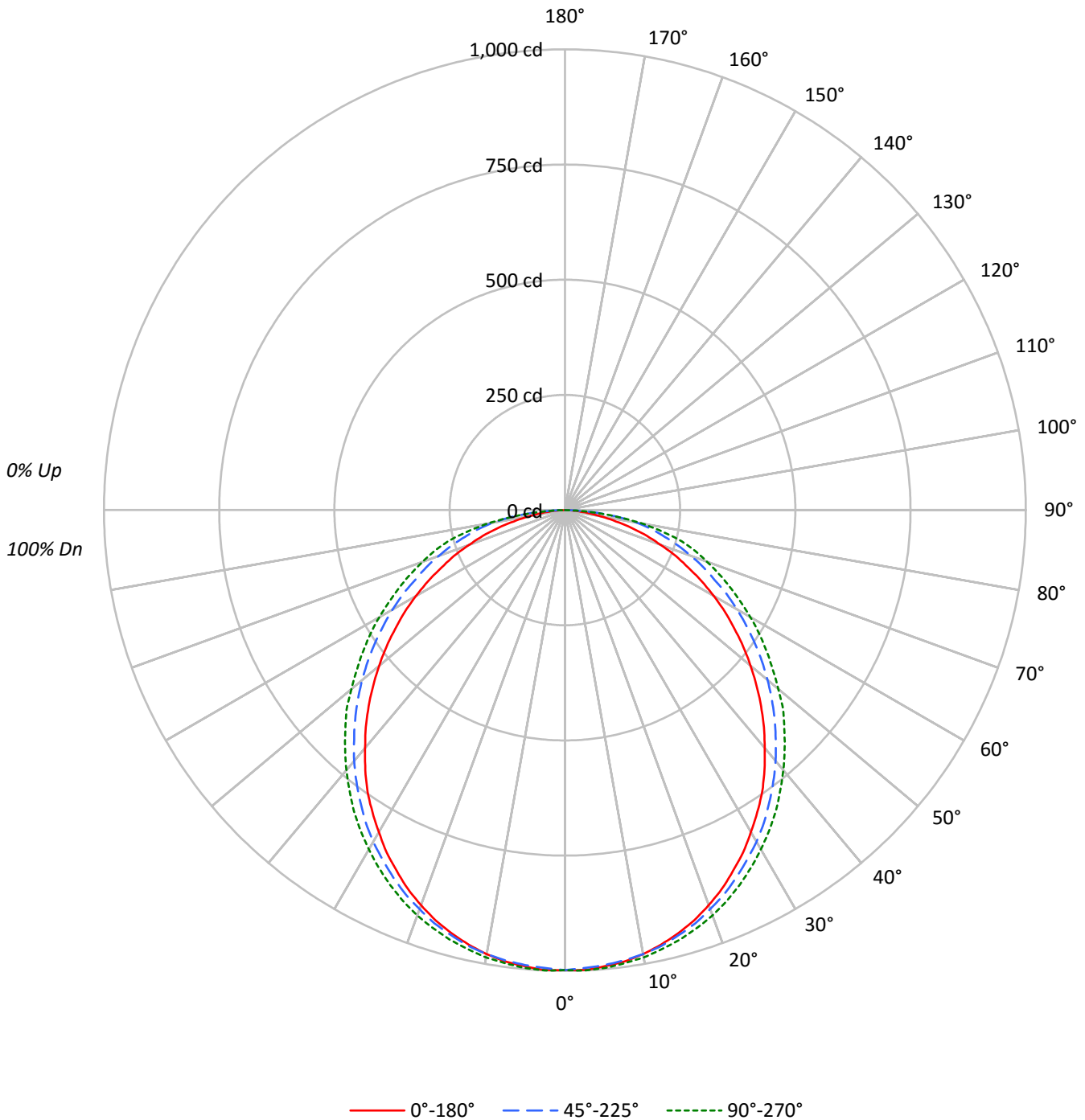
Lumens per Lamp: N/A  
Luminaire Lumens: 2842.0 lumens  
Efficiency: N/A  
Efficacy: 119.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.7  
Input Voltage (V): NR  
Input Current (A<sub>in</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



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### Luminous Intensity Polar Plot





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**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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1343	1343	1343
5°	1342	1339	1347
10°	1337	1337	1347
15°	1324	1330	1344
20°	1307	1320	1340
25°	1283	1307	1332
30°	1254	1292	1321
35°	1226	1271	1311
40°	1184	1249	1295
45°	1146	1225	1281
50°	1102	1202	1266
55°	1053	1179	1254
60°	1003	1161	1251
65°	940	1141	1259
70°	870	1147	1293
75°	779	1169	1366
80°	629	1238	1336
85°	474	1087	1059



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.5	3.3
10°-20°	270.1	9.5
20°-30°	406.0	14.3
30°-40°	483.6	17.0
40°-50°	494.9	17.4
50°-60°	445.6	15.7
60°-70°	349.9	12.3
70°-80°	227.1	8.0
80°-90°	70.3	2.5
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°	770.6	27.1
0°-40°	1254.2	44.1
0°-60°	2194.7	77.2
0°-90°	2842.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2842.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	998	998	998	998	998	
5°	994	996	991	997	998	94
15°	951	953	955	963	965	268
25°	864	871	880	895	897	398
35°	747	756	774	793	798	466
45°	602	617	644	668	673	464
55°	449	468	503	529	534	402
65°	295	318	358	388	395	294
75°	150	179	225	256	263	159
85°	31	57	70	69	69	37
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	998.4	998.4	998.4	998.4	998.4
2.5°	999.3	999.3	994.8	999.3	1000.2
5°	993.9	995.7	991.2	996.6	997.5
7.5°	988.5	988.5	985.8	991.2	992.1
10°	978.6	979.5	978.6	984.9	985.8
12.5°	965.9	967.7	968.6	974.9	975.8
15°	950.6	953.3	955.1	963.2	965.0
17.5°	933.4	936.1	940.6	949.7	951.5
20°	912.7	916.3	921.7	933.4	936.1
22.5°	890.1	893.7	902.7	913.6	918.1
25°	863.9	871.1	880.2	894.6	897.3
27.5°	837.7	844.0	855.8	871.1	874.7
30°	807.0	817.0	831.4	846.8	850.4
32.5°	777.2	787.2	804.3	820.6	825.1
35°	746.6	755.6	773.6	792.6	798.0
37.5°	711.3	723.1	742.9	761.9	767.3
40°	674.3	688.8	711.3	731.2	737.5
42.5°	639.1	654.5	677.0	698.7	705.9
45°	602.1	616.6	643.6	668.0	673.4
47.5°	564.2	580.5	609.3	633.7	642.7
50°	526.3	543.4	574.1	599.4	604.8
52.5°	488.4	506.4	538.9	566.0	568.7
55°	448.7	468.5	502.8	529.0	534.4
57.5°	412.5	429.7	466.7	493.8	500.1
60°	372.8	391.8	431.5	456.8	464.9
62.5°	334.9	354.8	396.3	421.6	428.8
65°	295.2	317.8	358.4	388.2	395.4
67.5°	260.9	282.6	325.9	354.8	362.0
70°	221.2	245.5	291.6	321.4	328.6
72.5°	186.9	212.1	258.2	287.1	297.9
75°	149.9	178.7	224.8	255.5	262.7
77.5°	113.7	147.1	194.1	217.6	217.6
80°	81.2	116.5	159.8	170.6	172.4
82.5°	53.3	87.6	118.3	117.4	117.4
85°	30.7	56.9	70.4	68.6	68.6
87.5°	11.7	23.5	25.3	25.3	24.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)