

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: P311220

Luminaire Tested: **24FCZ2-30-UNV-L82765-S-CA125-W2A-U-3000K**

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: P311220  
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-CA125-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET  
Light Source: (168) 3000K 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**

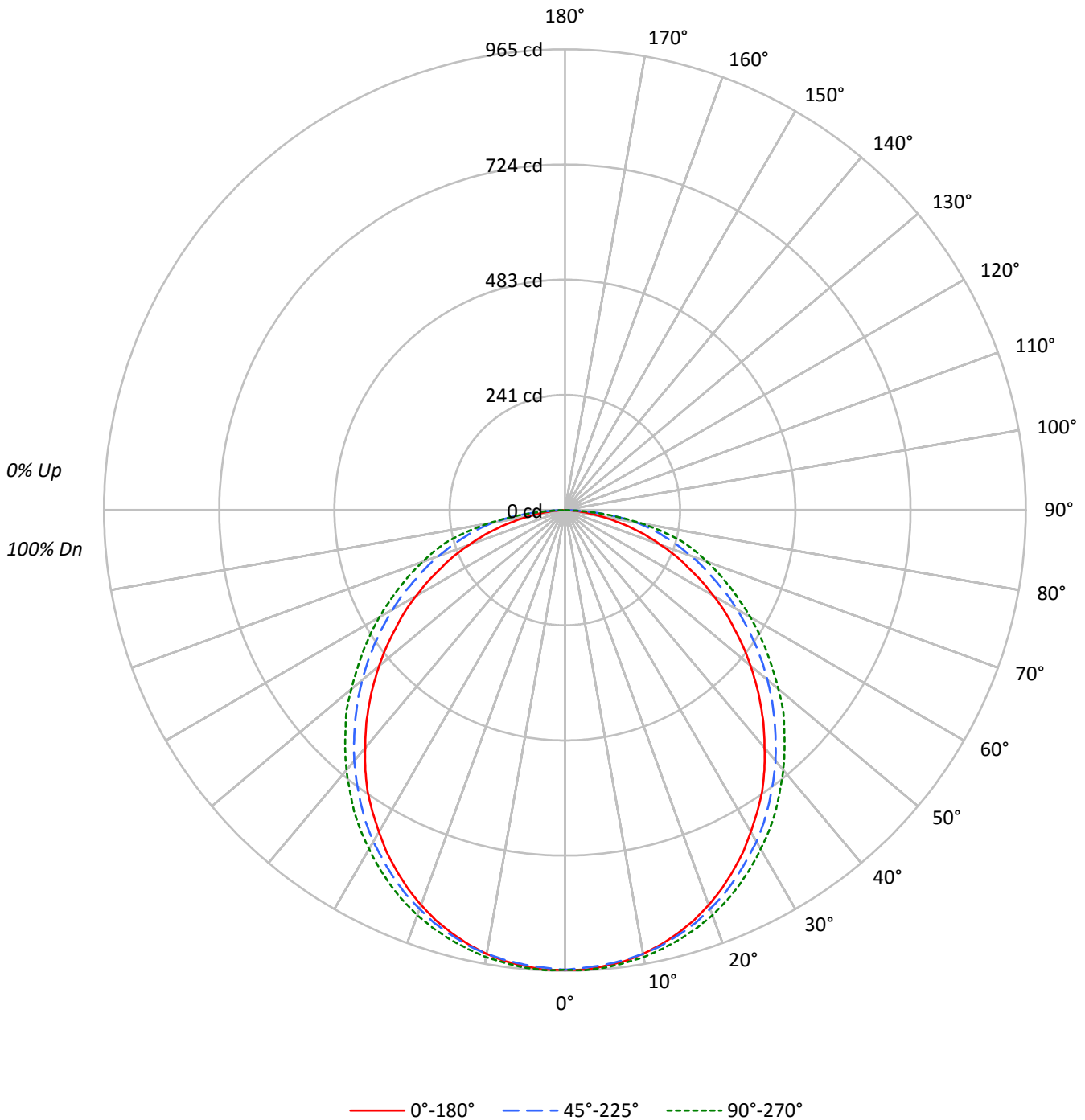
Lumens per Lamp: N/A  
Luminaire Lumens: 2741.0 lumens  
Efficiency: N/A  
Efficacy: 118.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.2  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1296	1296	1296
5°	1295	1291	1299
10°	1289	1289	1299
15°	1277	1283	1296
20°	1260	1273	1293
25°	1237	1260	1285
30°	1209	1246	1274
35°	1183	1225	1264
40°	1142	1205	1249
45°	1105	1181	1236
50°	1063	1159	1221
55°	1015	1137	1209
60°	968	1120	1207
65°	906	1100	1214
70°	839	1106	1247
75°	751	1127	1317
80°	607	1194	1289
85°	457	1048	1022



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	91.2	3.3
10°-20°	260.5	9.5
20°-30°	391.6	14.3
30°-40°	466.4	17.0
40°-50°	477.4	17.4
50°-60°	429.7	15.7
60°-70°	337.5	12.3
70°-80°	219.0	8.0
80°-90°	67.8	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°	743.2	27.1
0°-40°	1209.6	44.1
0°-60°	2116.7	77.2
0°-90°	2741.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2741.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	963	963	963	963	963	
5°	959	960	956	961	962	91
15°	917	919	921	929	931	259
25°	833	840	849	863	865	384
35°	720	729	746	764	770	449
45°	581	595	621	644	650	448
55°	433	452	485	510	515	388
65°	285	306	346	374	381	283
75°	144	172	217	246	253	153
85°	30	55	68	66	66	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	962.9	962.9	962.9	962.9	962.9
2.5°	963.8	963.8	959.4	963.8	964.7
5°	958.6	960.3	956.0	961.2	962.1
7.5°	953.4	953.4	950.7	956.0	956.8
10°	943.8	944.6	943.8	949.9	950.7
12.5°	931.6	933.3	934.2	940.3	941.2
15°	916.8	919.4	921.1	929.0	930.7
17.5°	900.2	902.9	907.2	915.9	917.7
20°	880.2	883.7	888.9	900.2	902.9
22.5°	858.5	861.9	870.6	881.1	885.4
25°	833.2	840.2	848.9	862.8	865.4
27.5°	808.0	814.1	825.4	840.2	843.7
30°	778.4	787.9	801.9	816.7	820.1
32.5°	749.6	759.2	775.7	791.4	795.8
35°	720.0	728.7	746.1	764.4	769.6
37.5°	686.1	697.4	716.5	734.8	740.0
40°	650.4	664.3	686.1	705.2	711.3
42.5°	616.4	631.2	653.0	673.9	680.8
45°	580.7	594.6	620.8	644.3	649.5
47.5°	544.2	559.8	587.7	611.2	619.9
50°	507.6	524.1	553.7	578.1	583.3
52.5°	471.0	488.4	519.8	545.9	548.5
55°	432.7	451.9	484.9	510.2	515.4
57.5°	397.9	414.4	450.1	476.2	482.3
60°	359.6	377.9	416.2	440.5	448.4
62.5°	323.0	342.2	382.2	406.6	413.6
65°	284.7	306.5	345.6	374.4	381.3
67.5°	251.6	272.5	314.3	342.2	349.1
70°	213.3	236.8	281.2	309.9	316.9
72.5°	180.2	204.6	249.0	276.9	287.3
75°	144.5	172.4	216.8	246.4	253.4
77.5°	109.7	141.9	187.2	209.8	209.8
80°	78.4	112.3	154.1	164.6	166.3
82.5°	51.4	84.5	114.1	113.2	113.2
85°	29.6	54.9	67.9	66.2	66.2
87.5°	11.3	22.6	24.4	24.4	23.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)