

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: P311228

Luminaire Tested: **24FCZ2-30-UNV-L82765-S-CP125-W2A-U-2700K**

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: P311228  
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-2700K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET  
Light Source: (168) 2700K 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**

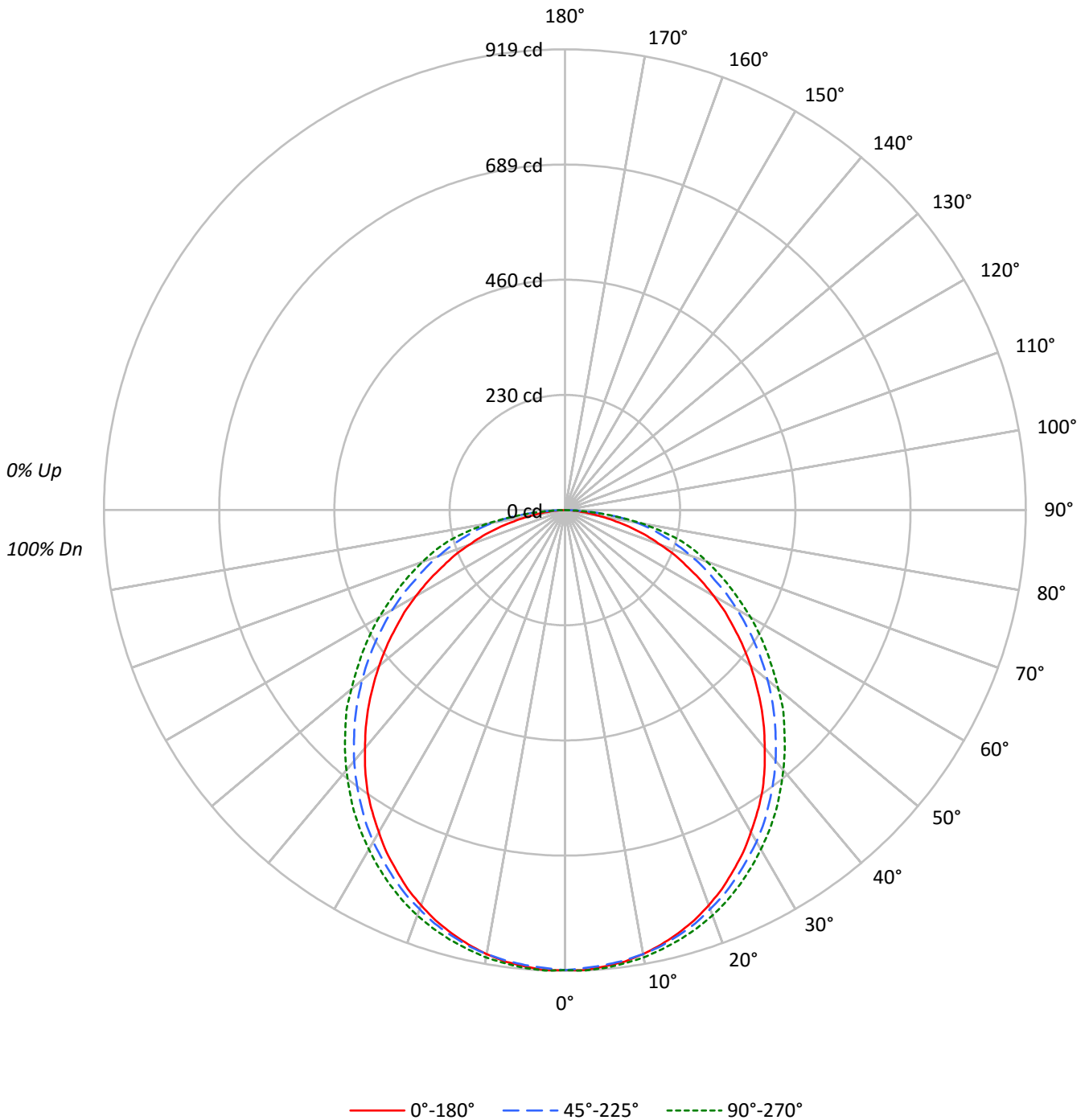
Lumens per Lamp: N/A  
Luminaire Lumens: 2612.0 lumens  
Efficiency: N/A  
Efficacy: 111.6 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.4  
Input Voltage (V): NR  
Input Current (A<sub>in</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°	1235	1235	1235
5°	1234	1230	1238
10°	1229	1229	1238
15°	1217	1223	1235
20°	1201	1213	1232
25°	1179	1201	1224
30°	1152	1187	1214
35°	1127	1168	1205
40°	1089	1148	1190
45°	1053	1126	1178
50°	1012	1105	1164
55°	967	1084	1152
60°	922	1067	1150
65°	864	1049	1157
70°	800	1054	1188
75°	716	1074	1255
80°	579	1138	1228
85°	435	999	974



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.9	3.3
10°-20°	248.2	9.5
20°-30°	373.1	14.3
30°-40°	444.5	17.0
40°-50°	454.9	17.4
50°-60°	409.5	15.7
60°-70°	321.6	12.3
70°-80°	208.7	8.0
80°-90°	64.6	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°	708.2	27.1
0°-40°	1152.7	44.1
0°-60°	2017.1	77.2
0°-90°	2612.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2612.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	918	918	918	918	918	
5°	914	915	911	916	917	87
15°	874	876	878	885	887	246
25°	794	801	809	822	825	366
35°	686	694	711	728	733	428
45°	553	567	592	614	619	427
55°	412	431	462	486	491	370
65°	271	292	329	357	363	270
75°	138	164	207	235	241	146
85°	28	52	65	63	63	34
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	917.6	917.6	917.6	917.6	917.6
2.5°	918.4	918.4	914.3	918.4	919.3
5°	913.5	915.1	911.0	916.0	916.8
7.5°	908.5	908.5	906.0	911.0	911.8
10°	899.4	900.2	899.4	905.2	906.0
12.5°	887.7	889.4	890.2	896.0	896.9
15°	873.6	876.1	877.8	885.3	886.9
17.5°	857.9	860.4	864.5	872.8	874.5
20°	838.8	842.1	847.1	857.9	860.4
22.5°	818.1	821.4	829.7	839.6	843.8
25°	794.0	800.6	808.9	822.2	824.7
27.5°	769.9	775.7	786.5	800.6	803.9
30°	741.7	750.8	764.1	778.2	781.5
32.5°	714.3	723.5	739.2	754.2	758.3
35°	686.1	694.4	711.0	728.4	733.4
37.5°	653.8	664.6	682.8	700.2	705.2
40°	619.8	633.0	653.8	672.0	677.8
42.5°	587.4	601.5	622.3	642.2	648.8
45°	553.4	566.7	591.6	614.0	618.9
47.5°	518.5	533.5	560.0	582.4	590.7
50°	483.7	499.5	527.7	550.9	555.9
52.5°	448.9	465.4	495.3	520.2	522.7
55°	412.3	430.6	462.1	486.2	491.2
57.5°	379.2	394.9	428.9	453.8	459.6
60°	342.7	360.1	396.6	419.8	427.3
62.5°	307.8	326.1	364.2	387.5	394.1
65°	271.3	292.0	329.4	356.8	363.4
67.5°	239.8	259.7	299.5	326.1	332.7
70°	203.3	225.7	268.0	295.4	302.0
72.5°	171.7	195.0	237.3	263.8	273.8
75°	137.7	164.3	206.6	234.8	241.4
77.5°	104.5	135.2	178.4	199.9	199.9
80°	74.7	107.0	146.9	156.8	158.5
82.5°	49.0	80.5	108.7	107.9	107.9
85°	28.2	52.3	64.7	63.1	63.1
87.5°	10.8	21.6	23.2	23.2	22.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)