

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: P311235

Luminaire Tested: **24FCZ2-30-UNV-L82765-S-CP125-W2A-U-5700K**

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: P311235
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-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (168) 5700K 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: 2968.0 lumens
Efficiency: N/A
Efficacy: 123.2 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

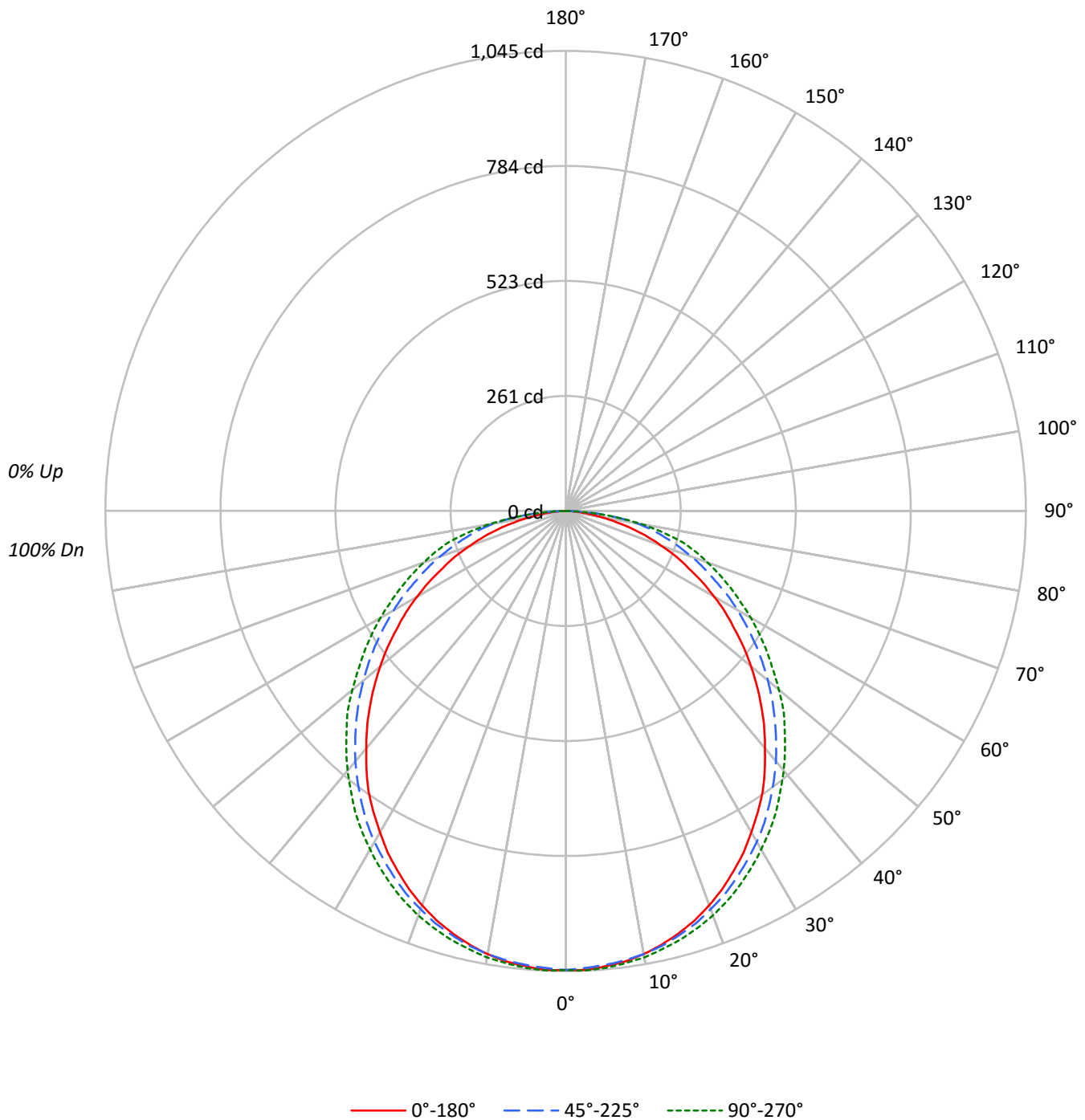
Input Watts (W): 24.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1403	1403	1403
5°	1402	1398	1407
10°	1396	1396	1407
15°	1383	1389	1404
20°	1365	1378	1400
25°	1339	1365	1391
30°	1309	1349	1380
35°	1281	1327	1369
40°	1237	1305	1353
45°	1196	1279	1338
50°	1150	1255	1322
55°	1099	1232	1309
60°	1048	1213	1306
65°	982	1192	1315
70°	909	1198	1350
75°	814	1220	1426
80°	657	1293	1395
85°	496	1135	1105



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.7	3.3
10°-20°	282.1	9.5
20°-30°	424.0	14.3
30°-40°	505.0	17.0
40°-50°	516.9	17.4
50°-60°	465.3	15.7
60°-70°	365.5	12.3
70°-80°	237.2	8.0
80°-90°	73.4	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°	804.8	27.1
0°-40°	1309.8	44.1
0°-60°	2292.0	77.2
0°-90°	2968.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2968.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1043	1043	1043	1043	1043	
5°	1038	1040	1035	1041	1042	99
15°	993	996	997	1006	1008	280
25°	902	910	919	934	937	416
35°	780	789	808	828	833	486
45°	629	644	672	698	703	485
55°	468	489	525	552	558	420
65°	308	332	374	405	413	307
75°	156	187	235	267	274	166
85°	32	59	74	72	72	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1042.7	1042.7	1042.7	1042.7	1042.7
2.5°	1043.6	1043.6	1038.9	1043.6	1044.6
5°	1038.0	1039.8	1035.1	1040.8	1041.7
7.5°	1032.3	1032.3	1029.5	1035.1	1036.1
10°	1021.9	1022.9	1021.9	1028.5	1029.5
12.5°	1008.7	1010.6	1011.6	1018.2	1019.1
15°	992.7	995.5	997.4	1005.9	1007.8
17.5°	974.8	977.6	982.3	991.8	993.7
20°	953.1	956.9	962.5	974.8	977.6
22.5°	929.5	933.3	942.7	954.1	958.8
25°	902.2	909.8	919.2	934.3	937.1
27.5°	874.9	881.5	893.7	909.8	913.5
30°	842.8	853.2	868.3	884.3	888.1
32.5°	811.7	822.1	840.0	857.0	861.7
35°	779.7	789.1	807.9	827.7	833.4
37.5°	742.9	755.1	775.9	795.7	801.3
40°	704.2	719.3	742.9	763.6	770.2
42.5°	667.5	683.5	707.1	729.7	737.2
45°	628.8	643.9	672.2	697.6	703.3
47.5°	589.2	606.2	636.4	661.8	671.2
50°	549.6	567.5	599.6	626.0	631.6
52.5°	510.0	528.9	562.8	591.1	593.9
55°	468.5	489.3	525.1	552.4	558.1
57.5°	430.8	448.7	487.4	515.7	522.3
60°	389.4	409.2	450.6	477.0	485.5
62.5°	349.8	370.5	413.9	440.3	447.8
65°	308.3	331.8	374.3	405.4	412.9
67.5°	272.5	295.1	340.3	370.5	378.0
70°	231.0	256.4	304.5	335.6	343.2
72.5°	195.1	221.5	269.6	299.8	311.1
75°	156.5	186.7	234.7	266.8	274.3
77.5°	118.8	153.7	202.7	227.2	227.2
80°	84.8	121.6	166.9	178.2	180.1
82.5°	55.6	91.4	123.5	122.6	122.6
85°	32.1	59.4	73.5	71.6	71.6
87.5°	12.3	24.5	26.4	26.4	25.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)