

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: P310229

Luminaire Tested: **24FCZ2-50-UNV-L82765-RDP-CA125-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: P310229
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-50-UNV-L82765-RDP-CA125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC 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: 2812.0 lumens
Efficiency: N/A
Efficacy: 65.9 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

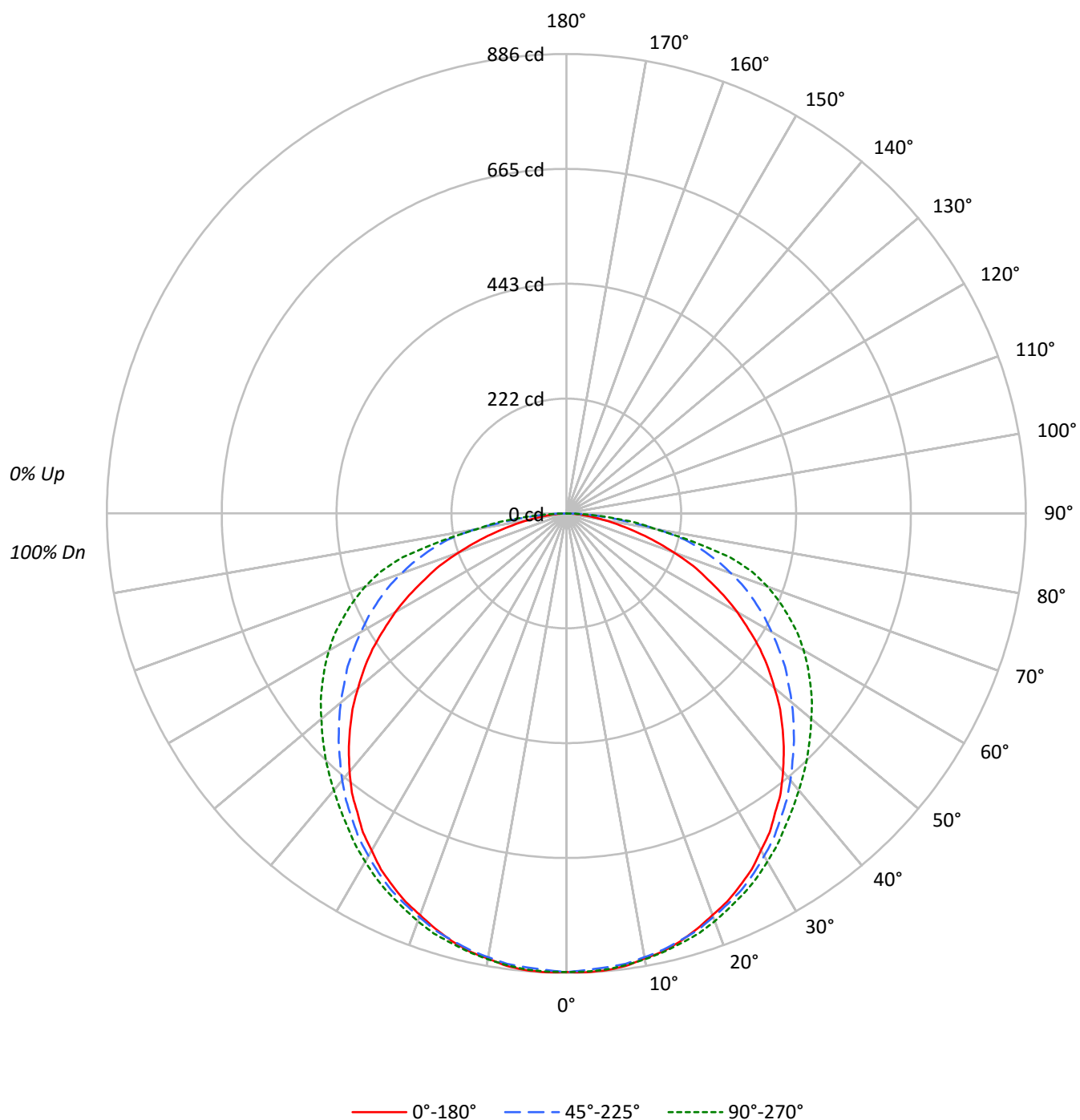
Input Watts (W): 42.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1190	1190	1190
5°	1194	1187	1192
10°	1191	1187	1193
15°	1189	1187	1195
20°	1180	1186	1198
25°	1176	1189	1201
30°	1166	1185	1205
35°	1155	1182	1210
40°	1142	1181	1225
45°	1123	1181	1253
50°	1098	1188	1290
55°	1070	1207	1348
60°	1025	1231	1422
65°	959	1274	1510
70°	873	1333	1624
75°	740	1407	1697
80°	583	1416	1372
85°	431	1076	1206



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.9	3.0
10°-20°	241.4	8.6
20°-30°	369.2	13.1
30°-40°	451.3	16.0
40°-50°	481.0	17.1
50°-60°	459.9	16.4
60°-70°	389.6	13.9
70°-80°	261.8	9.3
80°-90°	73.9	2.6
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°	694.5	24.7
0°-40°	1145.8	40.7
0°-60°	2086.7	74.2
0°-90°	2812.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2812.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	884	884	884	884	884	
5°	884	883	879	883	883	84
15°	854	854	852	859	858	241
25°	792	795	801	808	809	365
35°	703	709	720	734	736	440
45°	590	600	621	647	658	455
55°	456	473	515	555	575	406
65°	301	332	400	453	474	299
75°	142	194	271	317	326	152
85°	28	57	70	75	78	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	884.3	884.3	884.3	884.3	884.3
2.5°	885.7	885.7	881.5	884.3	884.3
5°	884.3	882.9	878.7	882.9	882.9
7.5°	880.1	878.7	875.9	880.1	878.7
10°	871.7	871.7	869.0	873.1	873.1
12.5°	864.8	863.4	862.0	867.6	866.2
15°	853.6	853.6	852.2	859.2	857.8
17.5°	839.7	841.1	842.5	848.0	849.4
20°	824.3	827.1	828.5	836.9	836.9
22.5°	810.4	811.8	814.6	822.9	822.9
25°	792.2	795.0	800.6	807.6	809.0
27.5°	774.1	775.5	782.5	792.2	793.6
30°	750.4	754.6	762.9	774.1	775.5
32.5°	729.5	733.7	743.4	754.6	757.4
35°	703.0	708.6	719.7	733.7	736.4
37.5°	679.3	683.4	697.4	712.7	716.9
40°	650.0	658.3	672.3	690.4	697.4
42.5°	620.7	629.0	645.8	669.5	677.9
45°	590.0	599.8	620.7	647.2	658.3
47.5°	559.3	570.5	594.2	624.9	637.4
50°	524.4	538.4	567.7	602.5	616.5
52.5°	491.0	507.7	539.8	578.8	597.0
55°	456.1	472.8	514.7	555.1	574.7
57.5°	417.0	439.4	485.4	531.4	552.3
60°	380.8	401.7	457.5	507.7	528.6
62.5°	341.7	369.6	429.6	482.6	503.5
65°	301.3	332.0	400.3	453.3	474.2
67.5°	265.0	298.5	371.0	424.0	444.9
70°	221.8	263.6	338.9	391.9	412.9
72.5°	181.3	227.3	305.5	357.1	376.6
75°	142.3	193.9	270.6	316.6	326.4
77.5°	106.0	160.4	234.3	253.9	246.9
80°	75.3	128.3	182.7	173.0	177.1
82.5°	48.8	97.6	113.0	128.3	132.5
85°	27.9	57.2	69.7	75.3	78.1
87.5°	12.6	20.9	27.9	27.9	26.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)