

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: P310053

Luminaire Tested: **24FCZ2-40-UNV-L82765-RDP-CA125-W2A-U-4500K**

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: P310053
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: 24FCZ2-40-UNV-L82765-RDP-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (168) 4500K 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: 2519.0 lumens
Efficiency: N/A
Efficacy: 75.6 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

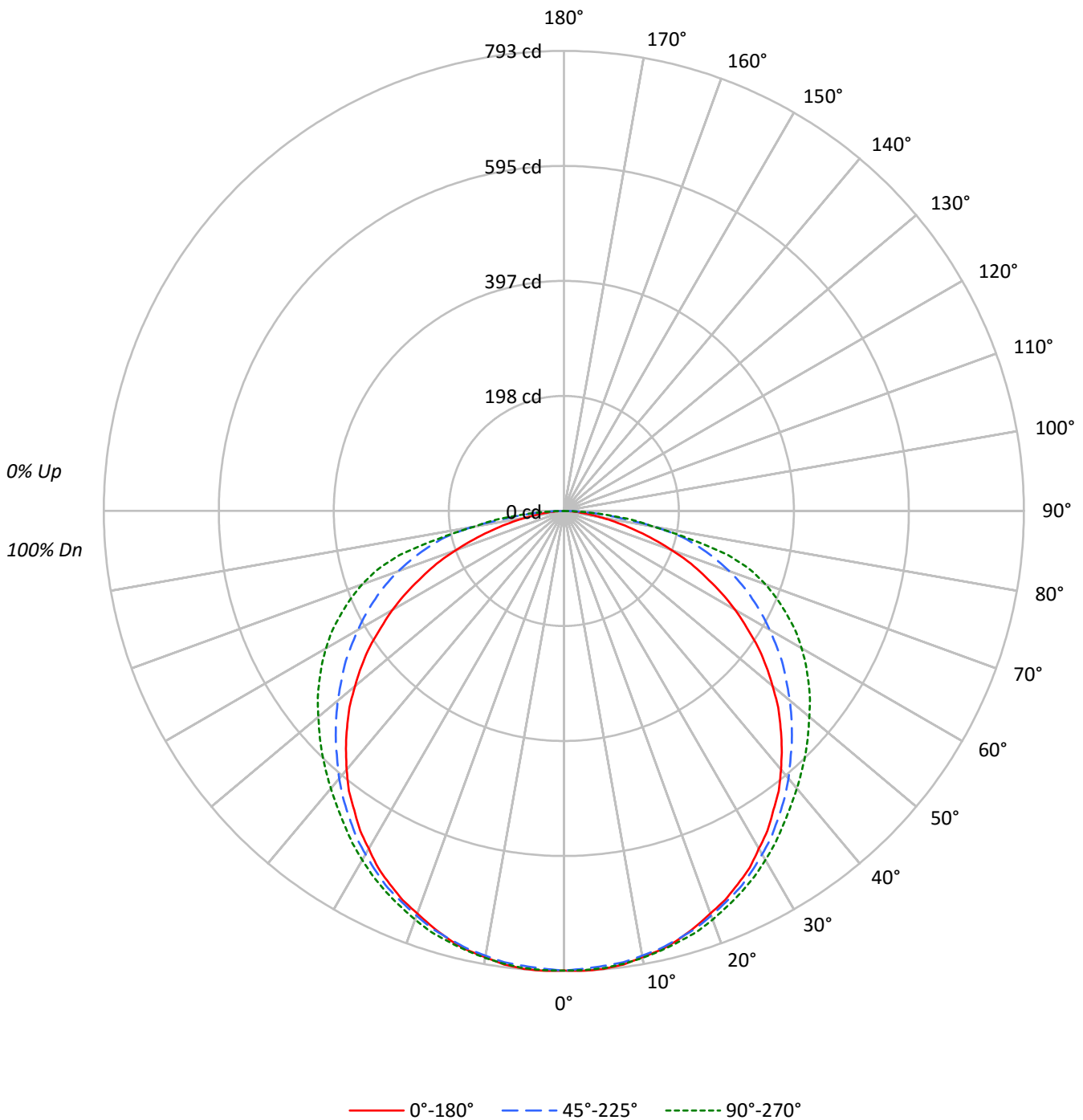
Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1066	1066	1066
5°	1070	1063	1068
10°	1067	1063	1069
15°	1065	1063	1070
20°	1057	1063	1073
25°	1054	1065	1076
30°	1044	1062	1079
35°	1034	1059	1084
40°	1023	1058	1097
45°	1006	1058	1122
50°	983	1064	1156
55°	958	1081	1208
60°	918	1103	1274
65°	859	1142	1352
70°	782	1194	1455
75°	662	1260	1520
80°	523	1268	1230
85°	386	965	1081



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.1	3.0
10°-20°	216.3	8.6
20°-30°	330.7	13.1
30°-40°	404.3	16.0
40°-50°	430.9	17.1
50°-60°	412.0	16.4
60°-70°	349.0	13.9
70°-80°	234.6	9.3
80°-90°	66.2	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°	622.1	24.7
0°-40°	1026.4	40.7
0°-60°	1869.3	74.2
0°-90°	2519.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2519.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	792	792	792	792	792	
5°	792	791	787	791	791	75
15°	765	765	763	770	768	216
25°	710	712	717	723	725	327
35°	630	635	645	657	660	394
45°	528	537	556	580	590	408
55°	409	424	461	497	515	364
65°	270	297	359	406	425	268
75°	127	174	242	284	292	136
85°	25	51	62	68	70	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	792.2	792.2	792.2	792.2	792.2
2.5°	793.4	793.4	789.7	792.2	792.2
5°	792.2	790.9	787.2	790.9	790.9
7.5°	788.4	787.2	784.7	788.4	787.2
10°	780.9	780.9	778.4	782.2	782.2
12.5°	774.7	773.4	772.2	777.2	775.9
15°	764.7	764.7	763.4	769.7	768.4
17.5°	752.2	753.4	754.7	759.7	760.9
20°	738.4	740.9	742.2	749.7	749.7
22.5°	725.9	727.2	729.7	737.2	737.2
25°	709.7	712.2	717.2	723.4	724.7
27.5°	693.4	694.7	700.9	709.7	710.9
30°	672.2	676.0	683.5	693.4	694.7
32.5°	653.5	657.2	666.0	676.0	678.5
35°	629.7	634.7	644.7	657.2	659.7
37.5°	608.5	612.2	624.7	638.5	642.2
40°	582.2	589.7	602.2	618.5	624.7
42.5°	556.0	563.5	578.5	599.7	607.2
45°	528.5	537.3	556.0	579.7	589.7
47.5°	501.0	511.0	532.3	559.8	571.0
50°	469.8	482.3	508.5	539.8	552.3
52.5°	439.8	454.8	483.5	518.5	534.8
55°	408.6	423.6	461.0	497.3	514.8
57.5°	373.6	393.6	434.8	476.0	494.8
60°	341.1	359.8	409.8	454.8	473.5
62.5°	306.1	331.1	384.8	432.3	451.1
65°	269.9	297.4	358.6	406.1	424.8
67.5°	237.4	267.4	332.4	379.8	398.6
70°	198.7	236.1	303.6	351.1	369.8
72.5°	162.4	203.7	273.6	319.9	337.4
75°	127.4	173.7	242.4	283.6	292.4
77.5°	95.0	143.7	209.9	227.4	221.2
80°	67.5	114.9	163.7	154.9	158.7
82.5°	43.7	87.5	101.2	114.9	118.7
85°	25.0	51.2	62.5	67.5	70.0
87.5°	11.2	18.7	25.0	25.0	23.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)