

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: P310233

Luminaire Tested: **24FCZ2-50-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: P310233
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-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: 3113.0 lumens
Efficiency: N/A
Efficacy: 71.6 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

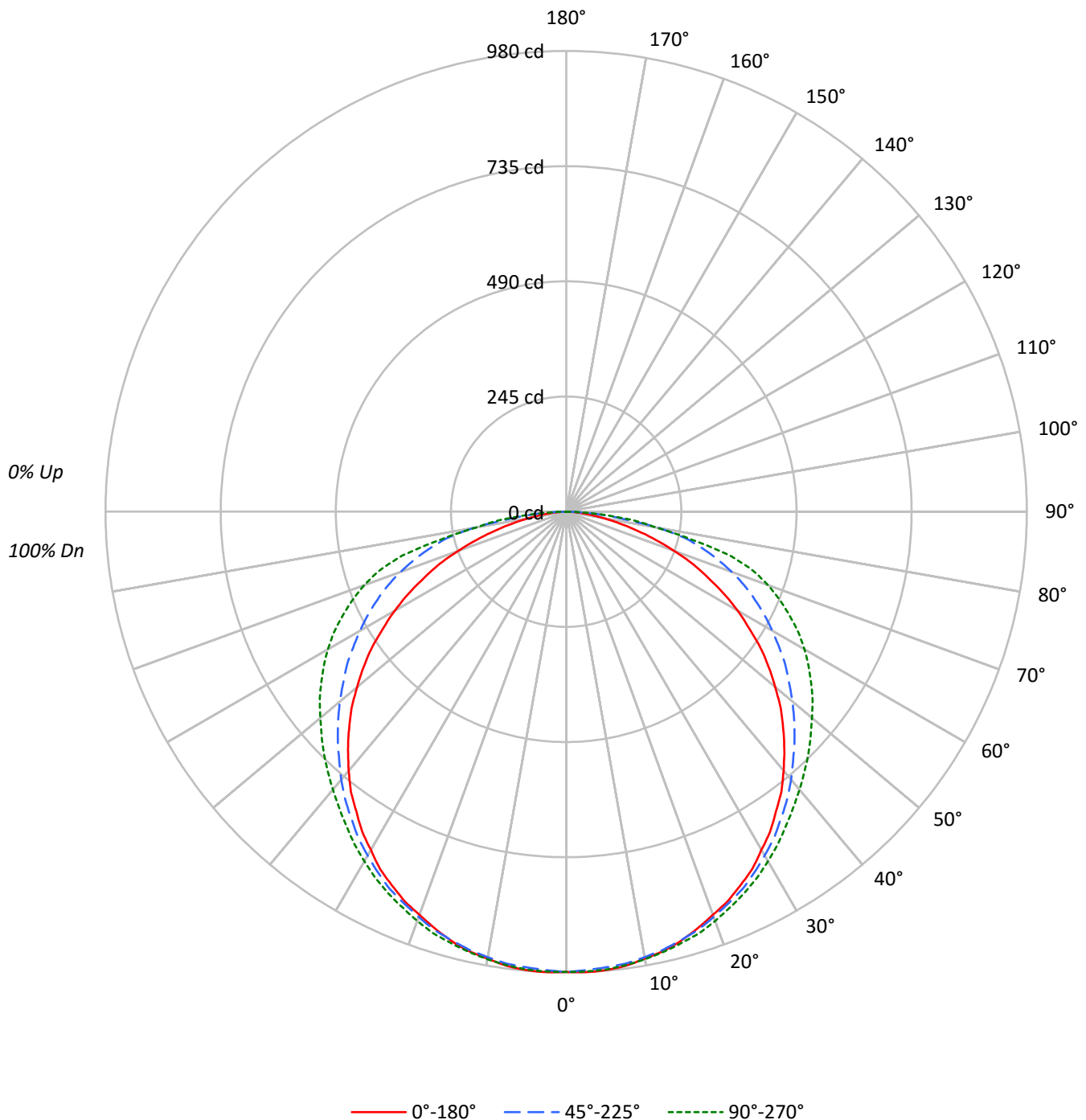
Input Watts (W): 43.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1317	1317	1317
5°	1322	1314	1320
10°	1319	1314	1321
15°	1316	1314	1323
20°	1307	1313	1327
25°	1302	1316	1330
30°	1291	1312	1334
35°	1278	1309	1339
40°	1264	1307	1356
45°	1243	1307	1387
50°	1215	1315	1429
55°	1184	1337	1492
60°	1134	1363	1575
65°	1062	1411	1671
70°	966	1476	1798
75°	819	1557	1878
80°	646	1567	1519
85°	477	1192	1335



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.9	3.0
10°-20°	267.3	8.6
20°-30°	408.7	13.1
30°-40°	499.6	16.0
40°-50°	532.5	17.1
50°-60°	509.1	16.4
60°-70°	431.3	13.9
70°-80°	289.9	9.3
80°-90°	81.8	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°	768.8	24.7
0°-40°	1268.4	40.7
0°-60°	2310.0	74.2
0°-90°	3113.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3113.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	979	979	979	979	979	
5°	979	977	973	977	977	93
15°	945	945	943	951	950	266
25°	877	880	886	894	896	404
35°	778	784	797	812	815	488
45°	653	664	687	716	729	504
55°	505	523	570	614	636	450
65°	334	368	443	502	525	331
75°	158	215	300	350	361	169
85°	31	63	77	83	86	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	978.9	978.9	978.9	978.9	978.9
2.5°	980.5	980.5	975.9	978.9	978.9
5°	978.9	977.4	972.8	977.4	977.4
7.5°	974.3	972.8	969.7	974.3	972.8
10°	965.1	965.1	962.0	966.6	966.6
12.5°	957.3	955.8	954.2	960.4	958.9
15°	945.0	945.0	943.4	951.2	949.6
17.5°	929.5	931.1	932.6	938.8	940.3
20°	912.6	915.6	917.2	926.5	926.5
22.5°	897.1	898.7	901.7	911.0	911.0
25°	877.0	880.1	886.3	894.0	895.6
27.5°	857.0	858.5	866.2	877.0	878.6
30°	830.7	835.3	844.6	857.0	858.5
32.5°	807.6	812.2	823.0	835.3	838.4
35°	778.2	784.4	796.7	812.2	815.3
37.5°	752.0	756.6	772.0	789.0	793.7
40°	719.5	728.8	744.2	764.3	772.0
42.5°	687.1	696.4	714.9	741.2	750.4
45°	653.1	664.0	687.1	716.5	728.8
47.5°	619.2	631.5	657.8	691.7	705.6
50°	580.6	596.0	628.4	667.0	682.5
52.5°	543.5	562.0	597.6	640.8	660.9
55°	504.9	523.4	569.8	614.5	636.2
57.5°	461.7	486.4	537.3	588.3	611.5
60°	421.5	444.7	506.5	562.0	585.2
62.5°	378.3	409.2	475.6	534.3	557.4
65°	333.5	367.5	443.2	501.8	525.0
67.5°	293.4	330.4	410.7	469.4	492.6
70°	245.5	291.8	375.2	433.9	457.0
72.5°	200.7	251.7	338.2	395.3	416.9
75°	157.5	214.6	299.6	350.5	361.3
77.5°	117.4	177.6	259.4	281.0	273.3
80°	83.4	142.1	202.3	191.5	196.1
82.5°	54.0	108.1	125.1	142.1	146.7
85°	30.9	63.3	77.2	83.4	86.5
87.5°	13.9	23.2	30.9	30.9	29.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)