

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: P310725

Luminaire Tested: **24FCZ2-40-UNV-L82765-CA125-W2A-U-3000K**

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: P310725
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-CA125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 3000K 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: 3482.0 lumens
Efficiency: N/A
Efficacy: 107.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

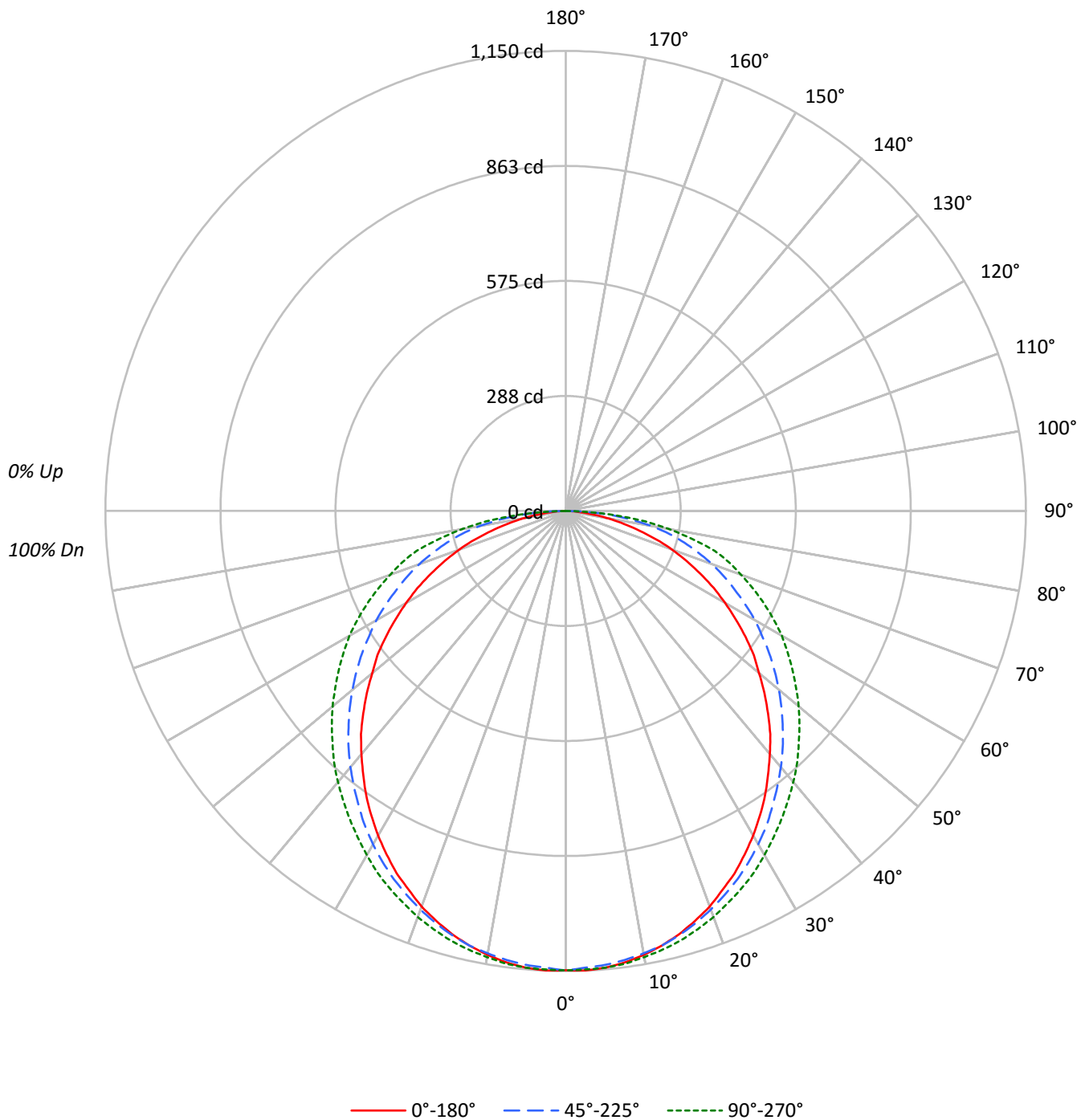
Input Watts (W): 32.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1545	1545	1545
5°	1548	1539	1548
10°	1539	1534	1547
15°	1526	1529	1548
20°	1507	1518	1547
25°	1484	1508	1545
30°	1456	1495	1544
35°	1427	1480	1545
40°	1394	1469	1554
45°	1361	1460	1567
50°	1320	1456	1591
55°	1287	1458	1623
60°	1237	1470	1679
65°	1181	1486	1740
70°	1118	1531	1836
75°	997	1598	2006
80°	851	1691	2050
85°	607	1677	1962



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.7	3.1
10°-20°	310.7	8.9
20°-30°	469.4	13.5
30°-40°	565.7	16.2
40°-50°	593.9	17.1
50°-60°	555.6	16.0
60°-70°	458.8	13.2
70°-80°	312.7	9.0
80°-90°	106.6	3.1
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°	888.8	25.5
0°-40°	1454.5	41.8
0°-60°	2603.9	74.8
0°-90°	3482.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3482.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1148	1148	1148	1148	1148	
5°	1146	1145	1139	1146	1146	109
15°	1095	1096	1098	1109	1111	309
25°	999	1004	1016	1035	1041	460
35°	869	878	901	931	940	543
45°	715	730	767	809	824	552
55°	549	571	622	672	692	490
65°	371	402	467	526	546	368
75°	192	236	307	365	386	205
85°	39	77	109	122	127	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1148.3	1148.3	1148.3	1148.3	1148.3
2.5°	1149.5	1148.3	1142.6	1148.3	1147.2
5°	1146.0	1144.9	1139.1	1146.0	1146.0
7.5°	1137.9	1137.9	1132.2	1140.2	1141.4
10°	1126.4	1126.4	1122.9	1132.2	1132.2
12.5°	1112.5	1112.5	1112.5	1121.8	1122.9
15°	1095.2	1096.3	1097.5	1109.1	1111.4
17.5°	1074.4	1076.7	1080.2	1094.0	1096.3
20°	1052.4	1054.8	1060.5	1076.7	1080.2
22.5°	1024.7	1030.5	1038.6	1057.1	1060.5
25°	999.3	1003.9	1015.5	1035.1	1040.9
27.5°	968.1	975.0	990.1	1010.9	1018.9
30°	936.9	943.9	962.3	986.6	993.5
32.5°	903.4	913.8	933.5	958.9	967.0
35°	868.8	878.0	901.1	931.1	940.4
37.5°	830.6	843.3	868.8	901.1	912.7
40°	793.7	807.5	836.4	871.1	884.9
42.5°	756.7	770.6	802.9	842.2	856.1
45°	715.1	730.1	767.1	808.7	823.7
47.5°	673.5	692.0	732.4	776.3	792.5
50°	630.8	651.6	695.5	741.7	760.2
52.5°	592.7	612.3	658.5	708.2	725.5
55°	548.8	570.7	621.5	672.4	692.0
57.5°	503.7	528.0	582.3	637.7	657.3
60°	459.8	486.4	546.4	601.9	623.8
62.5°	417.1	443.6	506.0	563.8	585.7
65°	370.8	402.0	466.7	525.6	546.4
67.5°	326.9	360.4	428.6	486.4	507.2
70°	284.2	316.5	389.3	445.9	466.7
72.5°	238.0	275.0	347.7	406.7	428.6
75°	191.8	235.7	307.3	365.1	385.9
77.5°	149.0	194.1	265.7	313.1	323.5
80°	109.8	156.0	218.3	251.8	264.6
82.5°	70.5	116.7	166.4	190.6	201.0
85°	39.3	77.4	108.6	122.5	127.1
87.5°	16.2	33.5	43.9	49.7	49.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)