

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: P310545

Luminaire Tested: **24FCZ2-30-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: P310545
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: 24FCZ2-30-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: 2608.0 lumens
Efficiency: N/A
Efficacy: 112.4 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

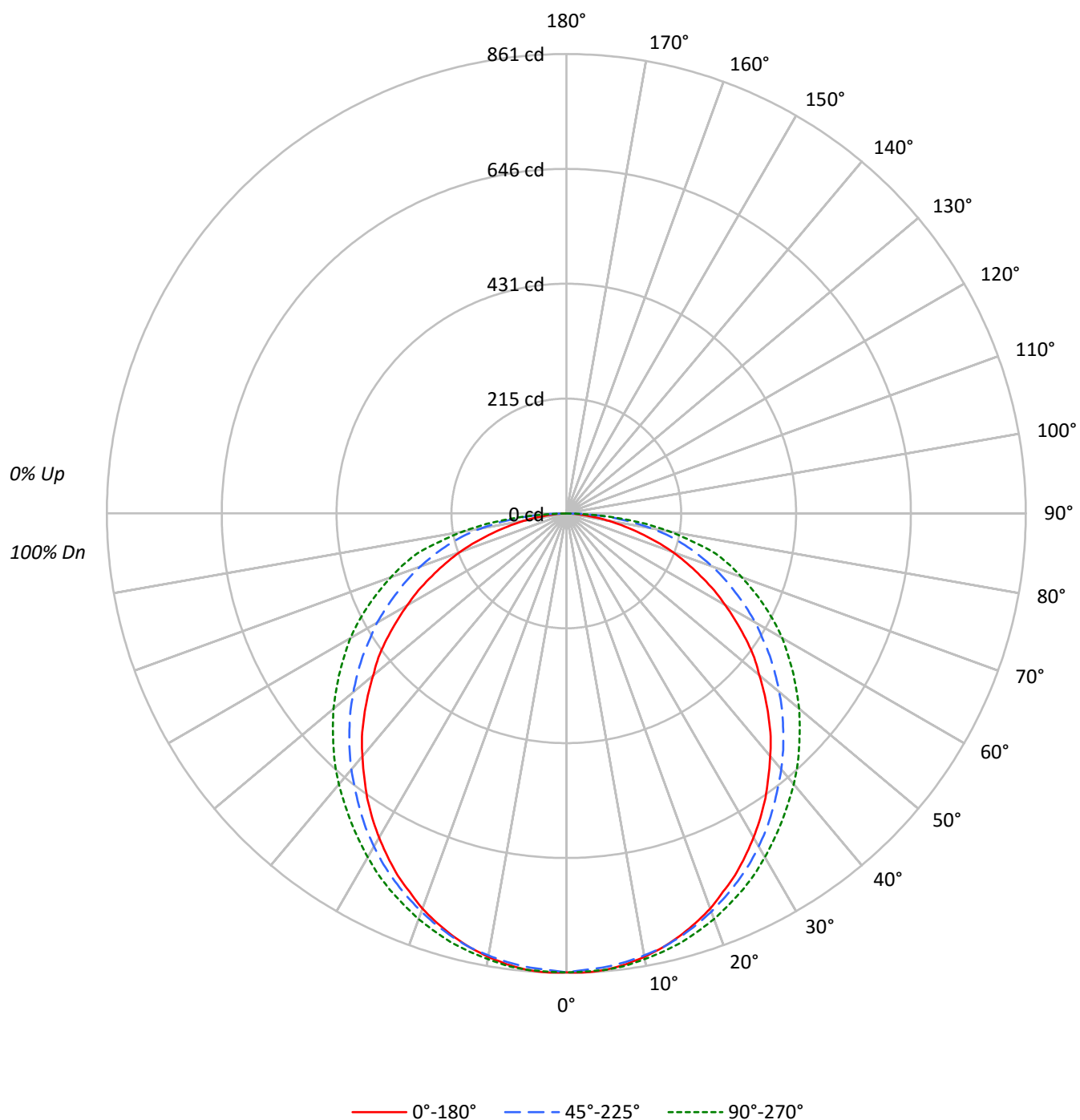
Input Watts (W): 23.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1157	1157	1157
5°	1159	1152	1159
10°	1153	1149	1159
15°	1143	1145	1159
20°	1129	1137	1158
25°	1111	1129	1157
30°	1090	1120	1156
35°	1069	1109	1157
40°	1044	1100	1164
45°	1019	1093	1174
50°	989	1090	1192
55°	964	1092	1216
60°	927	1101	1257
65°	884	1113	1303
70°	838	1147	1375
75°	747	1197	1502
80°	637	1267	1536
85°	454	1255	1470



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.4	3.1
10°-20°	232.7	8.9
20°-30°	351.5	13.5
30°-40°	423.7	16.2
40°-50°	444.8	17.1
50°-60°	416.1	16.0
60°-70°	343.7	13.2
70°-80°	234.2	9.0
80°-90°	79.9	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°	665.7	25.5
0°-40°	1089.4	41.8
0°-60°	1950.3	74.8
0°-90°	2608.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2608.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	860	860	860	860	860	
5°	858	858	853	858	858	81
15°	820	821	822	831	832	231
25°	748	752	761	775	780	344
35°	651	658	675	697	704	407
45°	536	547	575	606	617	413
55°	411	428	466	504	518	367
65°	278	301	350	394	409	276
75°	144	176	230	273	289	153
85°	29	58	81	92	95	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	860.1	860.1	860.1	860.1	860.1
2.5°	861.0	860.1	855.8	860.1	859.2
5°	858.4	857.5	853.2	858.4	858.4
7.5°	852.3	852.3	848.0	854.0	854.9
10°	843.7	843.7	841.1	848.0	848.0
12.5°	833.3	833.3	833.3	840.2	841.1
15°	820.3	821.2	822.0	830.7	832.4
17.5°	804.7	806.4	809.0	819.4	821.2
20°	788.3	790.0	794.3	806.4	809.0
22.5°	767.5	771.8	777.9	791.7	794.3
25°	748.5	751.9	760.6	775.3	779.6
27.5°	725.1	730.3	741.6	757.1	763.2
30°	701.7	706.9	720.8	739.0	744.1
32.5°	676.7	684.4	699.2	718.2	724.2
35°	650.7	657.6	674.9	697.4	704.3
37.5°	622.1	631.7	650.7	674.9	683.6
40°	594.5	604.8	626.5	652.4	662.8
42.5°	566.8	577.1	601.4	630.8	641.2
45°	535.6	546.9	574.6	605.7	616.9
47.5°	504.5	518.3	548.6	581.5	593.6
50°	472.4	488.0	520.9	555.5	569.4
52.5°	443.9	458.6	493.2	530.4	543.4
55°	411.0	427.5	465.5	503.6	518.3
57.5°	377.3	395.4	436.1	477.6	492.3
60°	344.4	364.3	409.3	450.8	467.3
62.5°	312.4	332.3	379.0	422.3	438.7
65°	277.8	301.1	349.6	393.7	409.3
67.5°	244.9	270.0	321.0	364.3	379.9
70°	212.9	237.1	291.6	334.0	349.6
72.5°	178.2	205.9	260.5	304.6	321.0
75°	143.6	176.5	230.2	273.4	289.0
77.5°	111.6	145.4	199.0	234.5	242.3
80°	82.2	116.8	163.5	188.6	198.2
82.5°	52.8	87.4	124.6	142.8	150.6
85°	29.4	58.0	81.3	91.7	95.2
87.5°	12.1	25.1	32.9	37.2	37.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)