

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: P310147

Luminaire Tested: **24FCZ2-45-UNV-L82765-RDP-CA125-W2A-U-6500K**

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: P310147
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: 24FCZ2-45-UNV-L82765-RDP-CA125-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (168) 6500K 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: 2902.0 lumens
Efficiency: N/A
Efficacy: 73.8 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

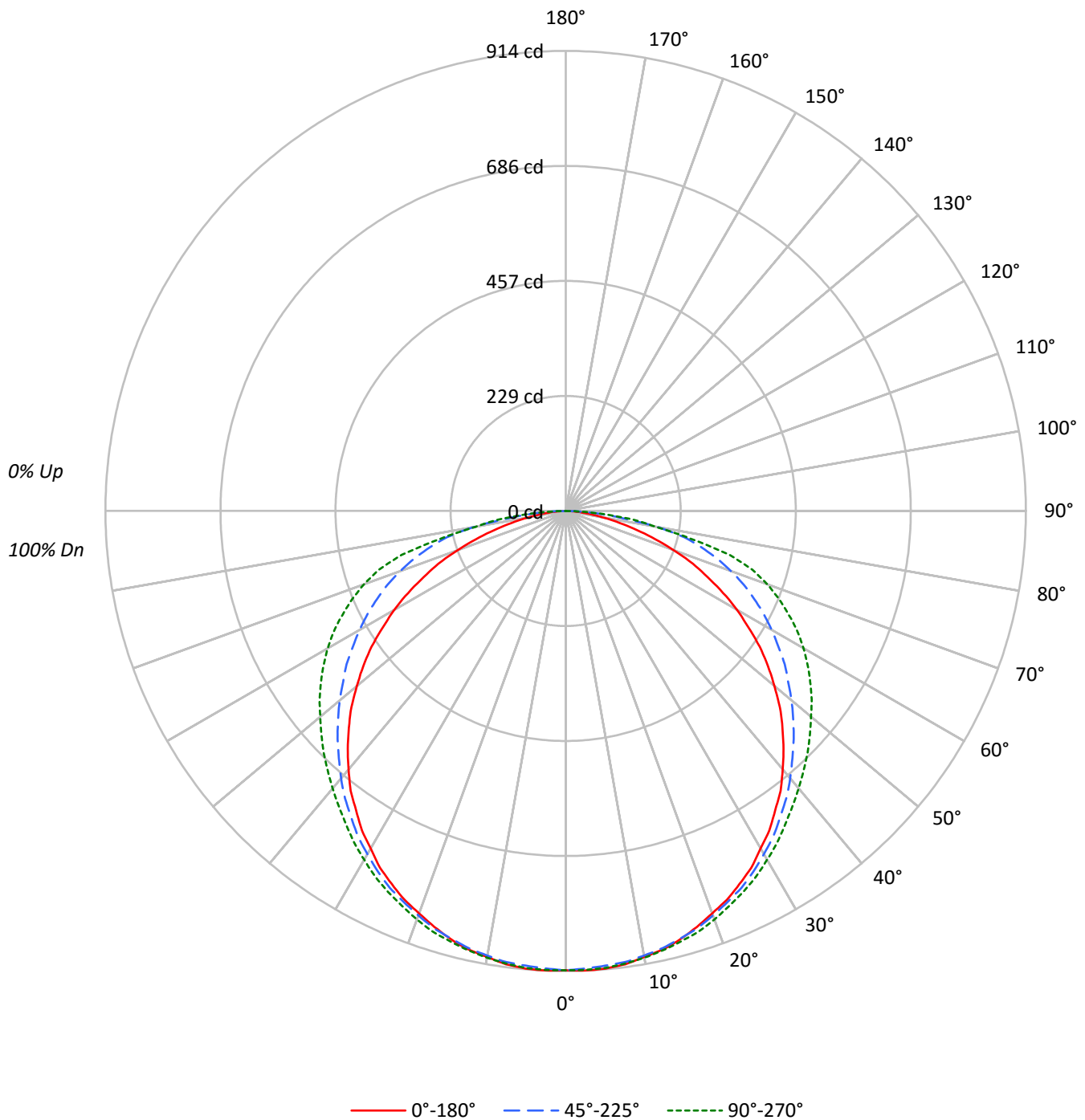
Input Watts (W): 39.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1228	1228	1228
5°	1233	1225	1231
10°	1229	1225	1231
15°	1227	1225	1233
20°	1218	1224	1237
25°	1214	1227	1239
30°	1203	1223	1243
35°	1192	1220	1248
40°	1178	1219	1264
45°	1159	1219	1293
50°	1133	1226	1332
55°	1104	1246	1391
60°	1058	1270	1468
65°	990	1315	1558
70°	900	1376	1676
75°	763	1451	1751
80°	602	1461	1416
85°	445	1112	1244



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.6	3.0
10°-20°	249.1	8.6
20°-30°	381.0	13.1
30°-40°	465.7	16.0
40°-50°	496.4	17.1
50°-60°	474.6	16.4
60°-70°	402.1	13.9
70°-80°	270.2	9.3
80°-90°	76.2	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°	716.7	24.7
0°-40°	1182.4	40.7
0°-60°	2153.5	74.2
0°-90°	2902.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2902.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	913	913	913	913	913	
5°	913	911	907	911	911	87
15°	881	881	880	887	885	248
25°	818	820	826	833	835	377
35°	726	731	743	757	760	454
45°	609	619	640	668	679	470
55°	471	488	531	573	593	419
65°	311	343	413	468	489	309
75°	147	200	279	327	337	157
85°	29	59	72	78	81	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	912.6	912.6	912.6	912.6	912.6
2.5°	914.0	914.0	909.7	912.6	912.6
5°	912.6	911.2	906.8	911.2	911.2
7.5°	908.3	906.8	904.0	908.3	906.8
10°	899.6	899.6	896.8	901.1	901.1
12.5°	892.4	891.0	889.6	895.3	893.9
15°	880.9	880.9	879.5	886.7	885.2
17.5°	866.5	868.0	869.4	875.2	876.6
20°	850.7	853.6	855.0	863.7	863.7
22.5°	836.3	837.7	840.6	849.3	849.3
25°	817.6	820.5	826.2	833.4	834.9
27.5°	798.9	800.3	807.5	817.6	819.0
30°	774.4	778.7	787.4	798.9	800.3
32.5°	752.8	757.1	767.2	778.7	781.6
35°	725.5	731.2	742.7	757.1	760.0
37.5°	701.0	705.3	719.7	735.5	739.9
40°	670.8	679.4	693.8	712.5	719.7
42.5°	640.5	649.2	666.5	690.9	699.6
45°	608.9	619.0	640.5	667.9	679.4
47.5°	577.2	588.7	613.2	644.9	657.8
50°	541.2	555.6	585.8	621.8	636.2
52.5°	506.7	524.0	557.1	597.4	616.1
55°	470.7	488.0	531.1	572.9	593.0
57.5°	430.4	453.4	500.9	548.4	570.0
60°	393.0	414.6	472.1	524.0	545.5
62.5°	352.7	381.4	443.3	498.0	519.6
65°	310.9	342.6	413.1	467.8	489.4
67.5°	273.5	308.0	382.9	437.6	459.2
70°	228.9	272.1	349.8	404.5	426.1
72.5°	187.1	234.6	315.2	368.5	388.6
75°	146.8	200.1	279.2	326.7	336.8
77.5°	109.4	165.5	241.8	262.0	254.8
80°	77.7	132.4	188.6	178.5	182.8
82.5°	50.4	100.8	116.6	132.4	136.7
85°	28.8	59.0	72.0	77.7	80.6
87.5°	13.0	21.6	28.8	28.8	27.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)