

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: P310260

Luminaire Tested: **24FCZ2-50-UNV-L82765-RDP-CP250-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: P310260
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-CP250-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB 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: 2900.0 lumens
Efficiency: N/A
Efficacy: 66.7 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

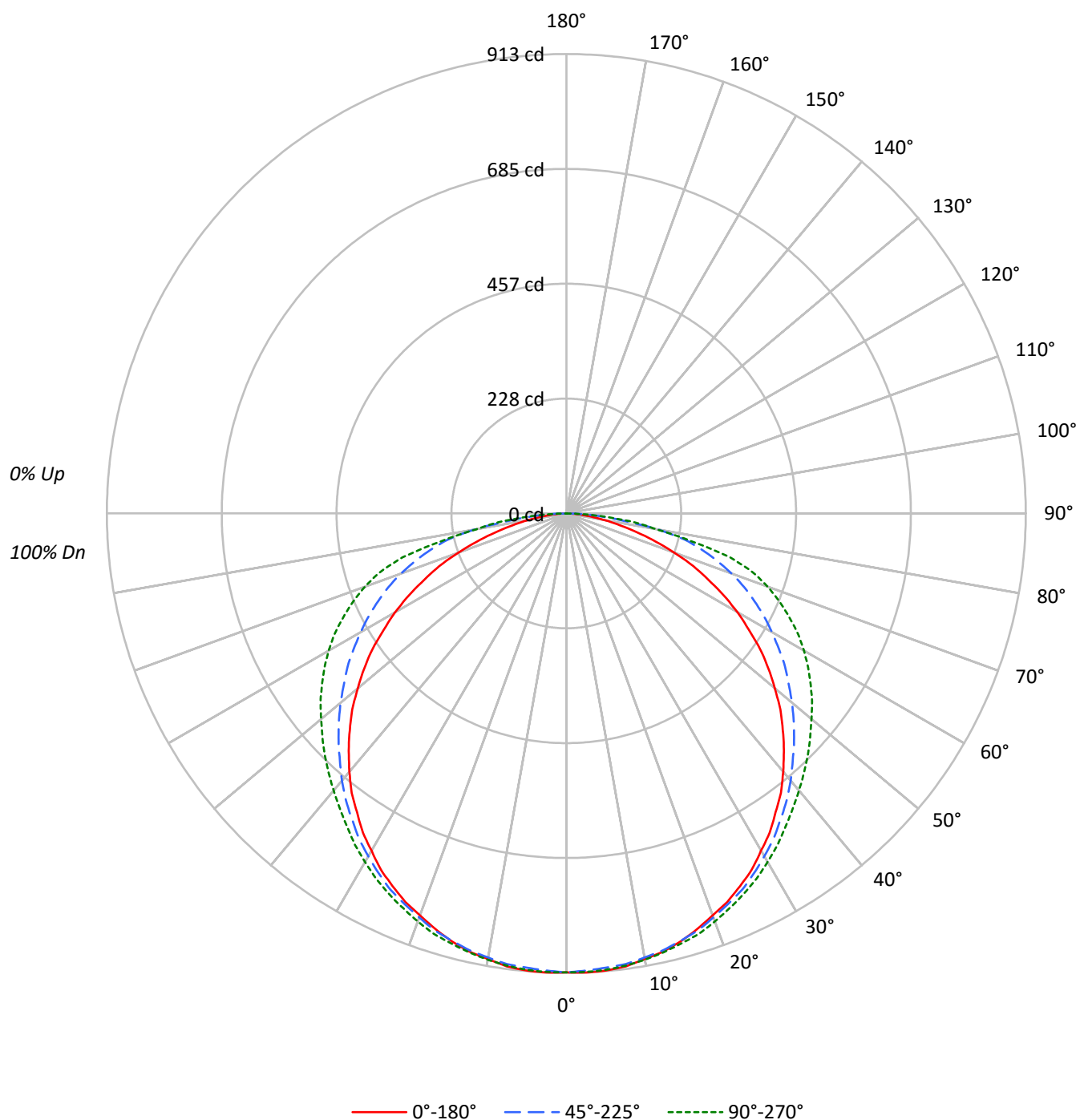
Input Watts (W): 43.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1227	1227	1227
5°	1232	1224	1230
10°	1228	1224	1230
15°	1226	1224	1232
20°	1217	1223	1236
25°	1213	1226	1239
30°	1202	1222	1243
35°	1191	1219	1248
40°	1177	1218	1263
45°	1158	1218	1292
50°	1132	1225	1331
55°	1103	1245	1390
60°	1057	1270	1467
65°	989	1314	1557
70°	900	1375	1675
75°	763	1451	1750
80°	602	1460	1416
85°	445	1110	1244



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.5	3.0
10°-20°	249.0	8.6
20°-30°	380.7	13.1
30°-40°	465.4	16.0
40°-50°	496.0	17.1
50°-60°	474.3	16.4
60°-70°	401.8	13.9
70°-80°	270.0	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°	716.2	24.7
0°-40°	1181.6	40.7
0°-60°	2152.0	74.2
0°-90°	2900.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2900.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	912	912	912	912	912	
5°	912	910	906	910	910	87
15°	880	880	879	886	885	248
25°	817	820	826	833	834	377
35°	725	731	742	757	760	454
45°	608	618	640	667	679	469
55°	470	488	531	572	593	419
65°	311	342	413	468	489	308
75°	147	200	279	326	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°	912.0	912.0	912.0	912.0	912.0
2.5°	913.4	913.4	909.1	912.0	912.0
5°	912.0	910.5	906.2	910.5	910.5
7.5°	907.7	906.2	903.3	907.7	906.2
10°	899.0	899.0	896.1	900.5	900.5
12.5°	891.8	890.4	889.0	894.7	893.3
15°	880.3	880.3	878.9	886.1	884.6
17.5°	865.9	867.4	868.8	874.6	876.0
20°	850.1	853.0	854.4	863.1	863.1
22.5°	835.7	837.2	840.0	848.7	848.7
25°	817.0	819.9	825.7	832.9	834.3
27.5°	798.3	799.8	807.0	817.0	818.5
30°	773.9	778.2	786.8	798.3	799.8
32.5°	752.3	756.6	766.7	778.2	781.1
35°	725.0	730.7	742.2	756.6	759.5
37.5°	700.5	704.8	719.2	735.0	739.4
40°	670.3	678.9	693.3	712.0	719.2
42.5°	640.1	648.7	666.0	690.4	699.1
45°	608.5	618.5	640.1	667.4	678.9
47.5°	576.8	588.3	612.8	644.4	657.4
50°	540.9	555.2	585.4	621.4	635.8
52.5°	506.3	523.6	556.7	597.0	615.6
55°	470.4	487.6	530.8	572.5	592.6
57.5°	430.1	453.1	500.6	548.0	569.6
60°	392.7	414.3	471.8	523.6	545.2
62.5°	352.4	381.2	443.0	497.7	519.3
65°	310.7	342.3	412.8	467.5	489.1
67.5°	273.3	307.8	382.6	437.3	458.9
70°	228.7	271.9	349.5	404.2	425.8
72.5°	187.0	234.5	315.0	368.2	388.4
75°	146.7	199.9	279.1	326.5	336.6
77.5°	109.3	165.4	241.7	261.8	254.6
80°	77.7	132.3	188.4	178.4	182.7
82.5°	50.3	100.7	116.5	132.3	136.7
85°	28.8	59.0	71.9	77.7	80.6
87.5°	12.9	21.6	28.8	28.8	27.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)