

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: P310232

Luminaire Tested: **24FCZ2-50-UNV-L82765-RDP-CA125-W2A-U-4000K**

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: P310232
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-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (168) 4000K 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: 3059.0 lumens
Efficiency: N/A
Efficacy: 70.8 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

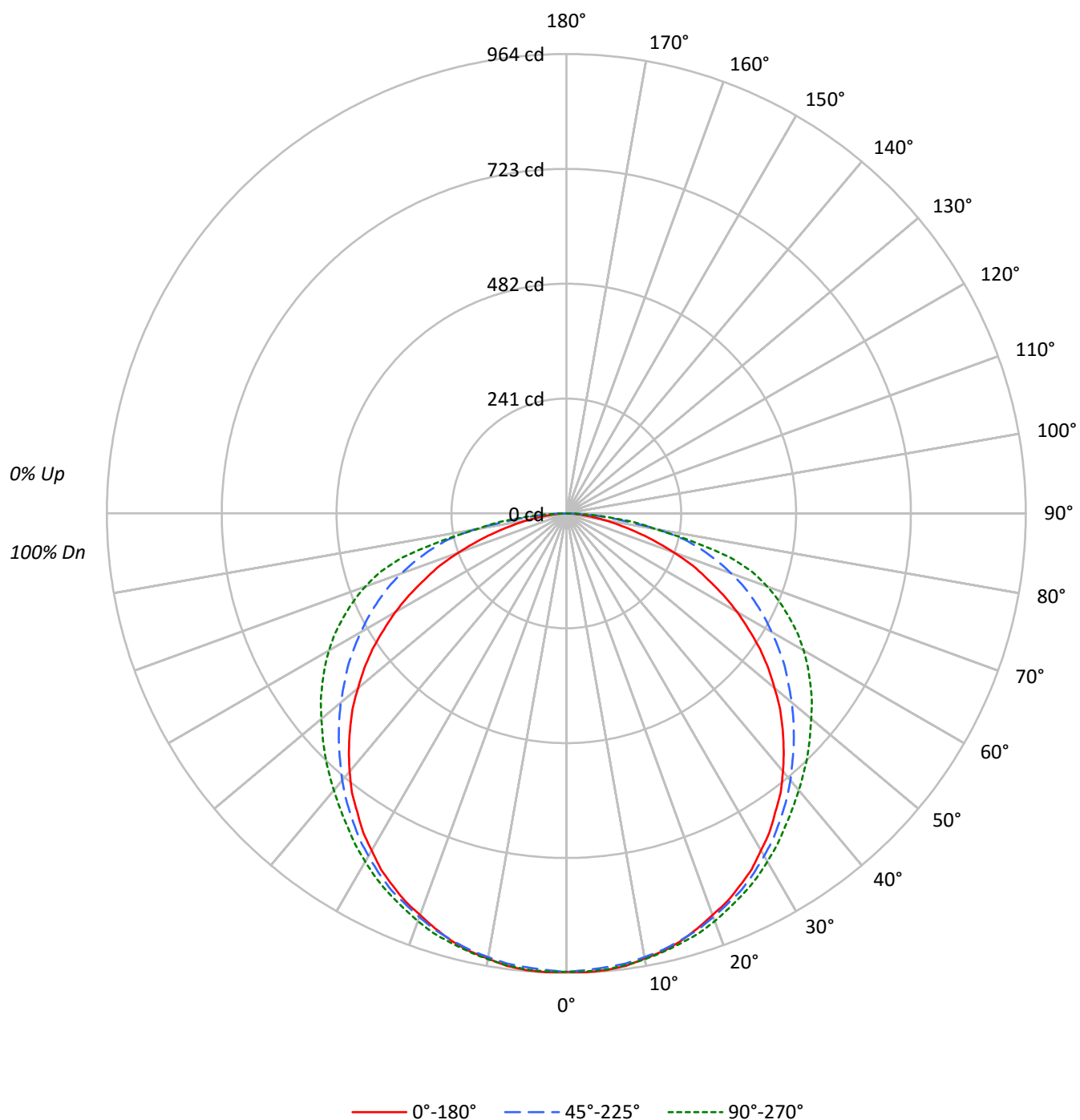
Input Watts (W): 43.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82		
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67		
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56		
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47		
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40		
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35		
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31		
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27		
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24		
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1294	1294	1294
5°	1299	1291	1297
10°	1296	1292	1298
15°	1293	1291	1300
20°	1284	1291	1304
25°	1279	1293	1306
30°	1268	1290	1311
35°	1256	1286	1316
40°	1242	1284	1332
45°	1221	1285	1363
50°	1194	1293	1404
55°	1164	1313	1466
60°	1115	1339	1548
65°	1043	1387	1642
70°	949	1450	1767
75°	805	1530	1845
80°	635	1540	1493
85°	468	1172	1312



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.3	3.0
10°-20°	262.6	8.6
20°-30°	401.6	13.1
30°-40°	491.0	16.0
40°-50°	523.3	17.1
50°-60°	500.3	16.4
60°-70°	423.8	13.9
70°-80°	284.8	9.3
80°-90°	80.3	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°	755.5	24.7
0°-40°	1246.4	40.7
0°-60°	2270.0	74.2
0°-90°	3059.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3059.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	962	962	962	962	962	
5°	962	960	956	960	960	91
15°	929	929	927	935	933	262
25°	862	865	871	878	880	397
35°	765	771	783	798	801	479
45°	642	652	675	704	716	495
55°	496	514	560	604	625	442
65°	328	361	436	493	516	325
75°	155	211	294	344	355	166
85°	30	62	76	82	85	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	962.0	962.0	962.0	962.0	962.0
2.5°	963.5	963.5	958.9	962.0	962.0
5°	962.0	960.5	955.9	960.5	960.5
7.5°	957.4	955.9	952.9	957.4	955.9
10°	948.3	948.3	945.3	949.8	949.8
12.5°	940.7	939.2	937.7	943.8	942.2
15°	928.6	928.6	927.1	934.7	933.1
17.5°	913.4	914.9	916.4	922.5	924.0
20°	896.7	899.8	901.3	910.4	910.4
22.5°	881.6	883.1	886.1	895.2	895.2
25°	861.8	864.9	870.9	878.5	880.0
27.5°	842.1	843.6	851.2	861.8	863.3
30°	816.3	820.9	830.0	842.1	843.6
32.5°	793.5	798.1	808.7	820.9	823.9
35°	764.7	770.8	782.9	798.1	801.1
37.5°	738.9	743.5	758.6	775.3	779.9
40°	707.1	716.2	731.3	751.1	758.6
42.5°	675.2	684.3	702.5	728.3	737.4
45°	641.8	652.4	675.2	704.0	716.2
47.5°	608.4	620.6	646.4	679.8	693.4
50°	570.5	585.7	617.5	655.5	670.6
52.5°	534.1	552.3	587.2	629.7	649.4
55°	496.2	514.4	559.9	603.9	625.1
57.5°	453.7	477.9	528.0	578.1	600.9
60°	414.2	437.0	497.7	552.3	575.1
62.5°	371.7	402.1	467.3	525.0	547.7
65°	327.7	361.1	435.5	493.1	515.9
67.5°	288.3	324.7	403.6	461.3	484.0
70°	241.3	286.8	368.7	426.4	449.1
72.5°	197.2	247.3	332.3	388.4	409.7
75°	154.8	210.9	294.4	344.4	355.0
77.5°	115.3	174.5	254.9	276.1	268.6
80°	81.9	139.6	198.8	188.1	192.7
82.5°	53.1	106.2	122.9	139.6	144.1
85°	30.3	62.2	75.9	81.9	85.0
87.5°	13.7	22.8	30.3	30.3	28.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)