

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: P313644

Luminaire Tested: **24FCZ2-50-UNV-L83050-RDP-CA08-W2A-U-5000K**

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: P313644
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-L83050-RDP-CA08-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (168) 5000K 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: 3260.0 lumens
Efficiency: N/A
Efficacy: 72.8 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

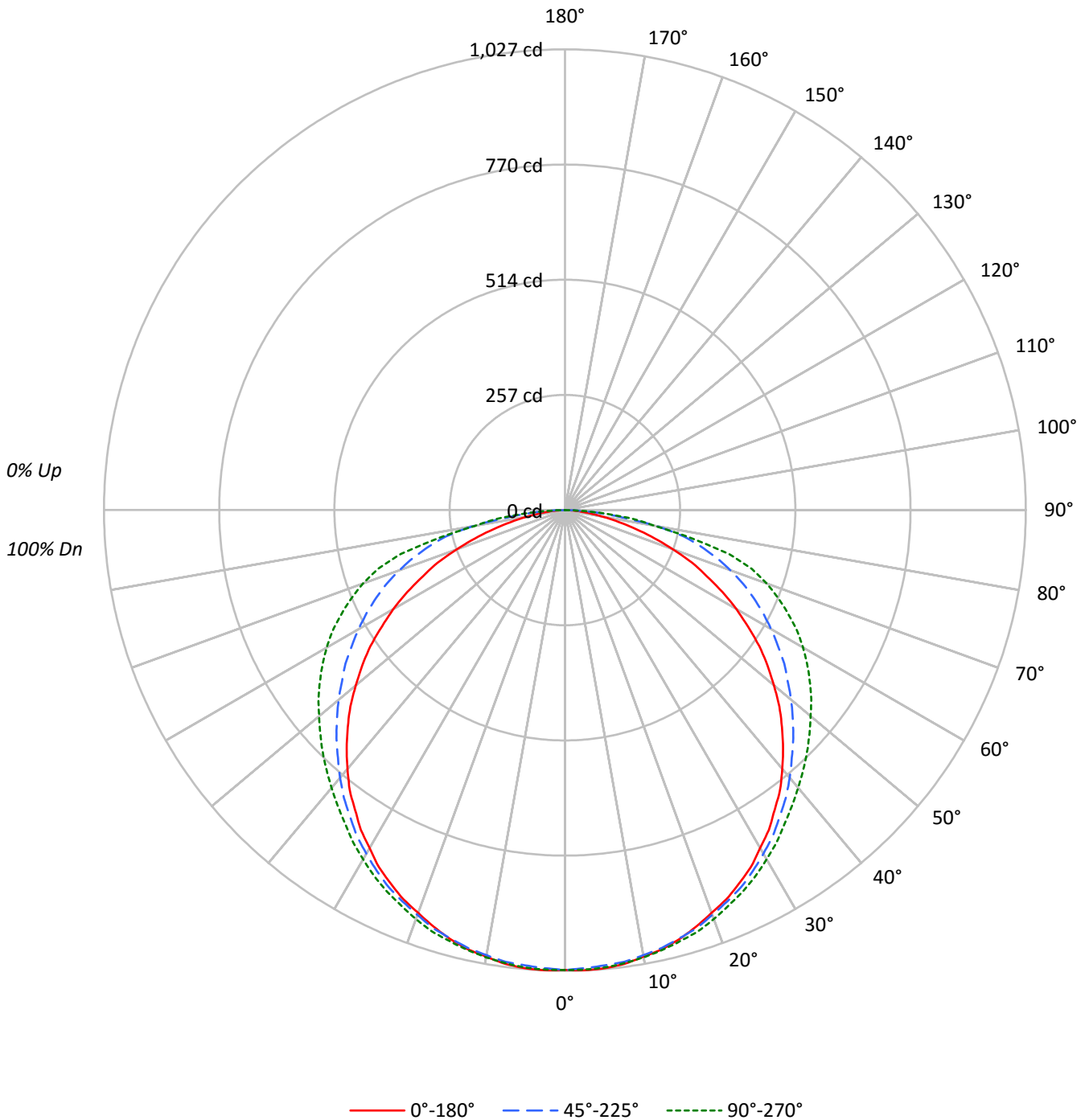
Input Watts (W): 44.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				10	0
RW	70	50	30	10	70	50	30	10	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	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°	1379	1379	1379
5°	1385	1376	1383
10°	1381	1376	1383
15°	1378	1376	1385
20°	1368	1375	1389
25°	1364	1378	1392
30°	1352	1374	1397
35°	1339	1371	1402
40°	1323	1369	1420
45°	1302	1369	1452
50°	1273	1378	1496
55°	1240	1400	1563
60°	1188	1427	1649
65°	1112	1478	1750
70°	1011	1546	1883
75°	857	1631	1967
80°	676	1641	1592
85°	499	1247	1399



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.2	3.0
10°-20°	279.9	8.6
20°-30°	428.0	13.1
30°-40°	523.2	16.0
40°-50°	557.6	17.1
50°-60°	533.2	16.4
60°-70°	451.7	13.9
70°-80°	303.6	9.3
80°-90°	85.6	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°	805.1	24.7
0°-40°	1328.3	40.7
0°-60°	2419.2	74.2
0°-90°	3260.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3260.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1025	1025	1025	1025	1025	
5°	1025	1024	1019	1024	1024	97
15°	990	990	988	996	994	279
25°	918	922	928	936	938	423
35°	815	821	834	850	854	511
45°	684	695	720	750	763	528
55°	529	548	597	644	666	471
65°	349	385	464	526	550	347
75°	165	225	314	367	378	177
85°	32	66	81	87	91	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1025.2	1025.2	1025.2	1025.2	1025.2
2.5°	1026.8	1026.8	1021.9	1025.2	1025.2
5°	1025.2	1023.6	1018.7	1023.6	1023.6
7.5°	1020.3	1018.7	1015.5	1020.3	1018.7
10°	1010.6	1010.6	1007.4	1012.2	1012.2
12.5°	1002.5	1000.9	999.3	1005.8	1004.2
15°	989.6	989.6	988.0	996.1	994.5
17.5°	973.4	975.0	976.7	983.1	984.8
20°	955.6	958.9	960.5	970.2	970.2
22.5°	939.5	941.1	944.3	954.0	954.0
25°	918.5	921.7	928.2	936.2	937.9
27.5°	897.4	899.1	907.1	918.5	920.1
30°	869.9	874.8	884.5	897.4	899.1
32.5°	845.7	850.5	861.9	874.8	878.0
35°	815.0	821.4	834.4	850.5	853.8
37.5°	787.5	792.3	808.5	826.3	831.1
40°	753.5	763.2	779.4	800.4	808.5
42.5°	719.6	729.3	748.7	776.2	785.9
45°	684.0	695.3	719.6	750.3	763.2
47.5°	648.4	661.4	688.8	724.4	739.0
50°	608.0	624.2	658.1	698.5	714.7
52.5°	569.2	588.6	625.8	671.1	692.1
55°	528.8	548.2	596.7	643.6	666.2
57.5°	483.5	509.4	562.7	616.1	640.3
60°	441.4	465.7	530.4	588.6	612.8
62.5°	396.2	428.5	498.0	559.5	583.7
65°	349.3	384.8	464.1	525.5	549.8
67.5°	307.2	346.0	430.1	491.6	515.8
70°	257.1	305.6	392.9	454.4	478.6
72.5°	210.2	263.6	354.1	414.0	436.6
75°	164.9	224.8	313.7	367.1	378.4
77.5°	122.9	186.0	271.7	294.3	286.2
80°	87.3	148.8	211.8	200.5	205.4
82.5°	56.6	113.2	131.0	148.8	153.6
85°	32.3	66.3	80.8	87.3	90.6
87.5°	14.6	24.3	32.3	32.3	30.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)