

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: P313641

Luminaire Tested: **24FCZ2-50-UNV-L83050-RDP-CA08-W2A-U-3500K**

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: P313641
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-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (168) 3500K 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: 3076.0 lumens
Efficiency: N/A
Efficacy: 72.0 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

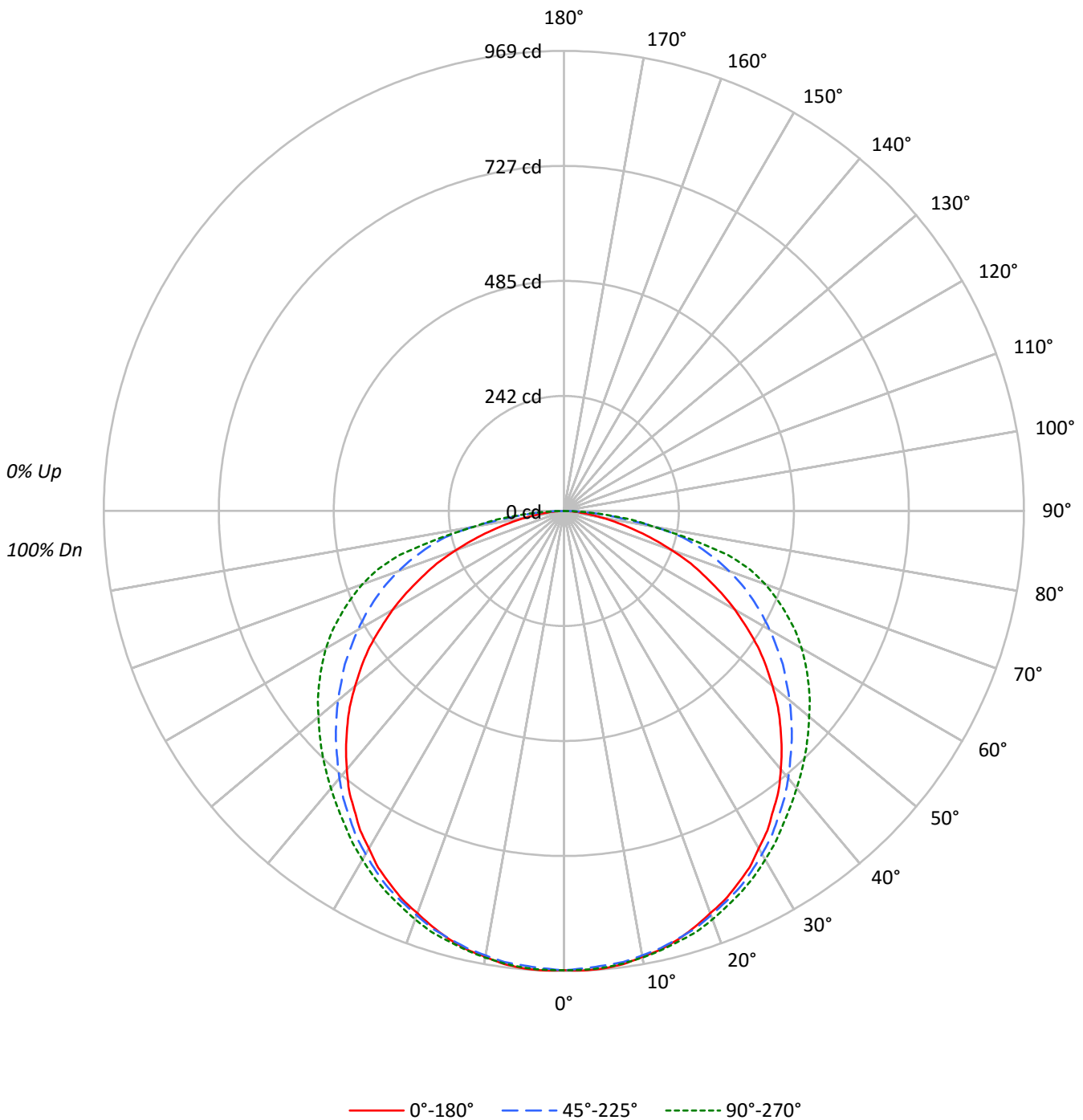
Input Watts (W): 42.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1301	1301	1301
5°	1306	1298	1304
10°	1303	1299	1305
15°	1301	1299	1307
20°	1291	1298	1311
25°	1287	1300	1314
30°	1275	1297	1318
35°	1263	1293	1323
40°	1249	1292	1340
45°	1228	1292	1370
50°	1201	1300	1412
55°	1170	1321	1475
60°	1121	1347	1556
65°	1049	1394	1651
70°	954	1459	1777
75°	809	1539	1856
80°	638	1549	1502
85°	471	1178	1318



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.8	3.0
10°-20°	264.1	8.6
20°-30°	403.8	13.1
30°-40°	493.7	16.0
40°-50°	526.2	17.1
50°-60°	503.1	16.4
60°-70°	426.2	13.9
70°-80°	286.4	9.3
80°-90°	80.8	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°	759.7	24.7
0°-40°	1253.4	40.7
0°-60°	2282.6	74.2
0°-90°	3076.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3076.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	967	967	967	967	967	
5°	967	966	961	966	966	92
15°	934	934	932	940	938	263
25°	867	870	876	883	885	399
35°	769	775	787	802	806	482
45°	645	656	679	708	720	498
55°	499	517	563	607	629	444
65°	330	363	438	496	519	327
75°	156	212	296	346	357	167
85°	30	63	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°	967.3	967.3	967.3	967.3	967.3
2.5°	968.8	968.8	964.3	967.3	967.3
5°	967.3	965.8	961.2	965.8	965.8
7.5°	962.7	961.2	958.2	962.7	961.2
10°	953.6	953.6	950.5	955.1	955.1
12.5°	946.0	944.4	942.9	949.0	947.5
15°	933.7	933.7	932.2	939.9	938.3
17.5°	918.5	920.0	921.5	927.6	929.2
20°	901.7	904.8	906.3	915.4	915.4
22.5°	886.5	888.0	891.0	900.2	900.2
25°	866.6	869.7	875.8	883.4	884.9
27.5°	846.8	848.3	855.9	866.6	868.1
30°	820.8	825.4	834.6	846.8	848.3
32.5°	798.0	802.5	813.2	825.4	828.5
35°	769.0	775.1	787.3	802.5	805.6
37.5°	743.0	747.6	762.9	779.6	784.2
40°	711.0	720.1	735.4	755.2	762.9
42.5°	679.0	688.1	706.4	732.4	741.5
45°	645.4	656.1	679.0	707.9	720.1
47.5°	611.8	624.0	650.0	683.5	697.3
50°	573.7	588.9	621.0	659.1	674.4
52.5°	537.1	555.4	590.5	633.2	653.0
55°	498.9	517.2	563.0	607.2	628.6
57.5°	456.2	480.6	531.0	581.3	604.2
60°	416.5	439.4	500.4	555.4	578.3
62.5°	373.8	404.3	469.9	527.9	550.8
65°	329.6	363.1	437.9	495.9	518.7
67.5°	289.9	326.5	405.8	463.8	486.7
70°	242.6	288.4	370.8	428.7	451.6
72.5°	198.3	248.7	334.1	390.6	411.9
75°	155.6	212.1	296.0	346.3	357.0
77.5°	116.0	175.5	256.3	277.7	270.1
80°	82.4	140.4	199.9	189.2	193.8
82.5°	53.4	106.8	123.6	140.4	144.9
85°	30.5	62.6	76.3	82.4	85.4
87.5°	13.7	22.9	30.5	30.5	29.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)