

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: P313652

Luminaire Tested: **24FCZ2-50-UNV-L83050-RDP-CP125-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: P313652
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-CP125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB 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: 3155.0 lumens
Efficiency: N/A
Efficacy: 72.2 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

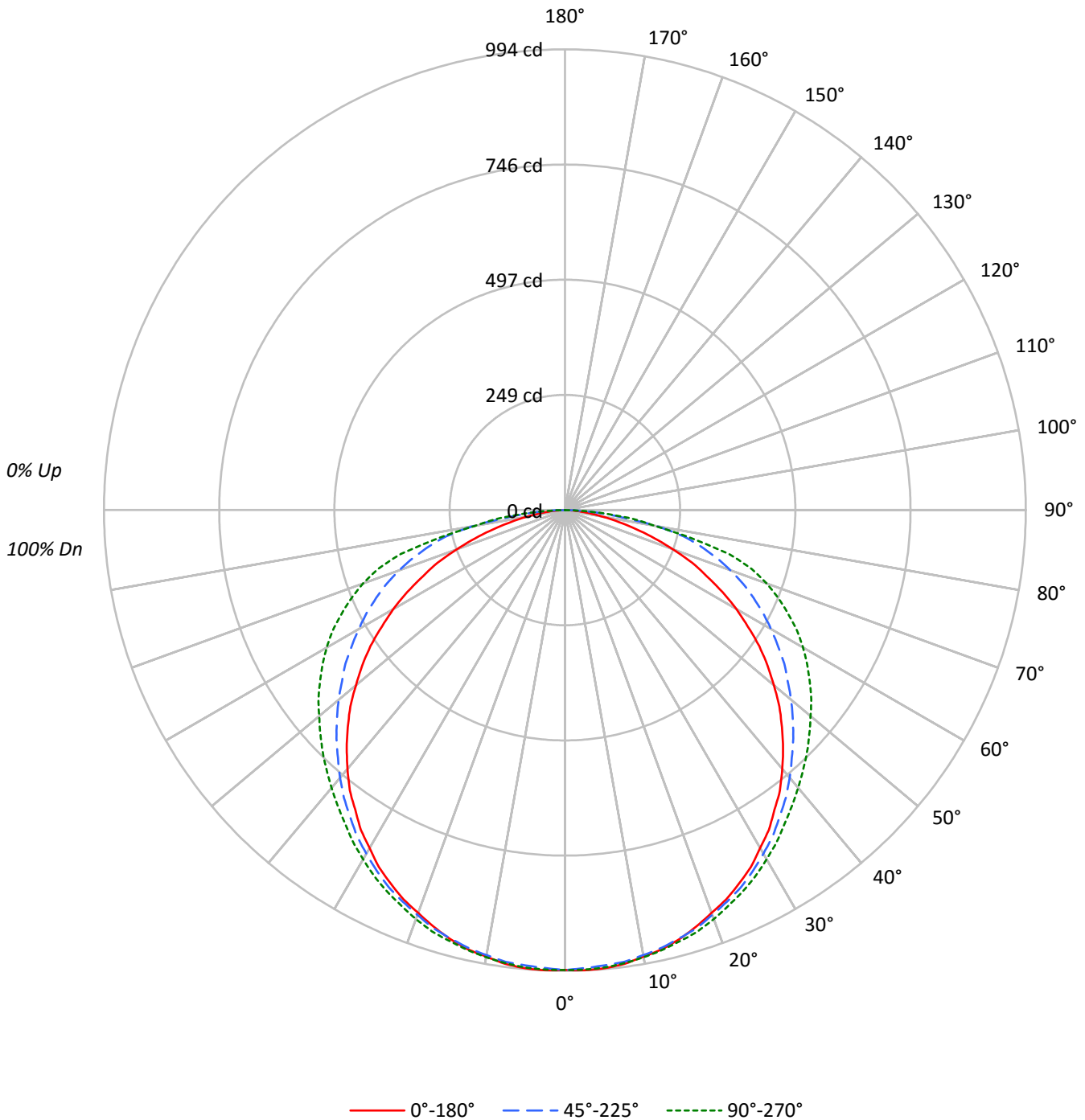
Input Watts (W): 43.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1335	1335	1335
5°	1340	1332	1338
10°	1336	1332	1338
15°	1334	1332	1341
20°	1324	1331	1344
25°	1320	1334	1348
30°	1308	1330	1352
35°	1295	1326	1357
40°	1281	1325	1374
45°	1260	1325	1405
50°	1232	1333	1448
55°	1200	1355	1512
60°	1150	1381	1596
65°	1076	1430	1694
70°	979	1496	1822
75°	830	1578	1904
80°	655	1588	1540
85°	483	1207	1352



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.1	3.0
10°-20°	270.9	8.6
20°-30°	414.2	13.1
30°-40°	506.4	16.0
40°-50°	539.7	17.1
50°-60°	516.0	16.4
60°-70°	437.1	13.9
70°-80°	293.8	9.3
80°-90°	82.9	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°	779.2	24.7
0°-40°	1285.5	40.7
0°-60°	2341.2	74.2
0°-90°	3155.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3155.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	992	992	992	992	992	
5°	992	991	986	991	991	94
15°	958	958	956	964	962	270
25°	889	892	898	906	908	410
35°	789	795	808	823	826	494
45°	662	673	696	726	739	511
55°	512	530	578	623	645	456
65°	338	372	449	509	532	336
75°	160	218	304	355	366	171
85°	31	64	78	84	88	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	992.2	992.2	992.2	992.2	992.2
2.5°	993.7	993.7	989.0	992.2	992.2
5°	992.2	990.6	985.9	990.6	990.6
7.5°	987.5	985.9	982.8	987.5	985.9
10°	978.1	978.1	974.9	979.6	979.6
12.5°	970.2	968.7	967.1	973.4	971.8
15°	957.7	957.7	956.2	964.0	962.4
17.5°	942.1	943.6	945.2	951.5	953.0
20°	924.9	928.0	929.6	939.0	939.0
22.5°	909.2	910.8	913.9	923.3	923.3
25°	888.9	892.0	898.3	906.1	907.7
27.5°	868.5	870.1	877.9	888.9	890.4
30°	841.9	846.6	856.0	868.5	870.1
32.5°	818.5	823.1	834.1	846.6	849.7
35°	788.7	795.0	807.5	823.1	826.3
37.5°	762.1	766.8	782.5	799.7	804.4
40°	729.3	738.6	754.3	774.6	782.5
42.5°	696.4	705.8	724.6	751.2	760.5
45°	662.0	672.9	696.4	726.1	738.6
47.5°	627.5	640.1	666.7	701.1	715.2
50°	588.4	604.1	636.9	676.0	691.7
52.5°	550.9	569.6	605.6	649.4	669.8
55°	511.7	530.5	577.5	622.8	644.7
57.5°	467.9	492.9	544.6	596.2	619.7
60°	427.2	450.7	513.3	569.6	593.1
62.5°	383.4	414.7	482.0	541.5	564.9
65°	338.0	372.5	449.1	508.6	532.1
67.5°	297.3	334.9	416.3	475.7	499.2
70°	248.8	295.8	380.3	439.7	463.2
72.5°	203.4	255.1	342.7	400.6	422.5
75°	159.6	217.5	303.6	355.2	366.2
77.5°	118.9	180.0	262.9	284.8	277.0
80°	84.5	144.0	205.0	194.0	198.7
82.5°	54.8	109.5	126.8	144.0	148.7
85°	31.3	64.2	78.2	84.5	87.6
87.5°	14.1	23.5	31.3	31.3	29.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)