

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: P312437

Luminaire Tested: **14FCZ2-44-UNV-L83050-S-CP250-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: P312437
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-40)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-44-UNV-L83050-S-CP250-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE,SMOOTH LENS, 0.250" 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: 4092.0 lumens
Efficiency: N/A
Efficacy: 104.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.26 / 1.36
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

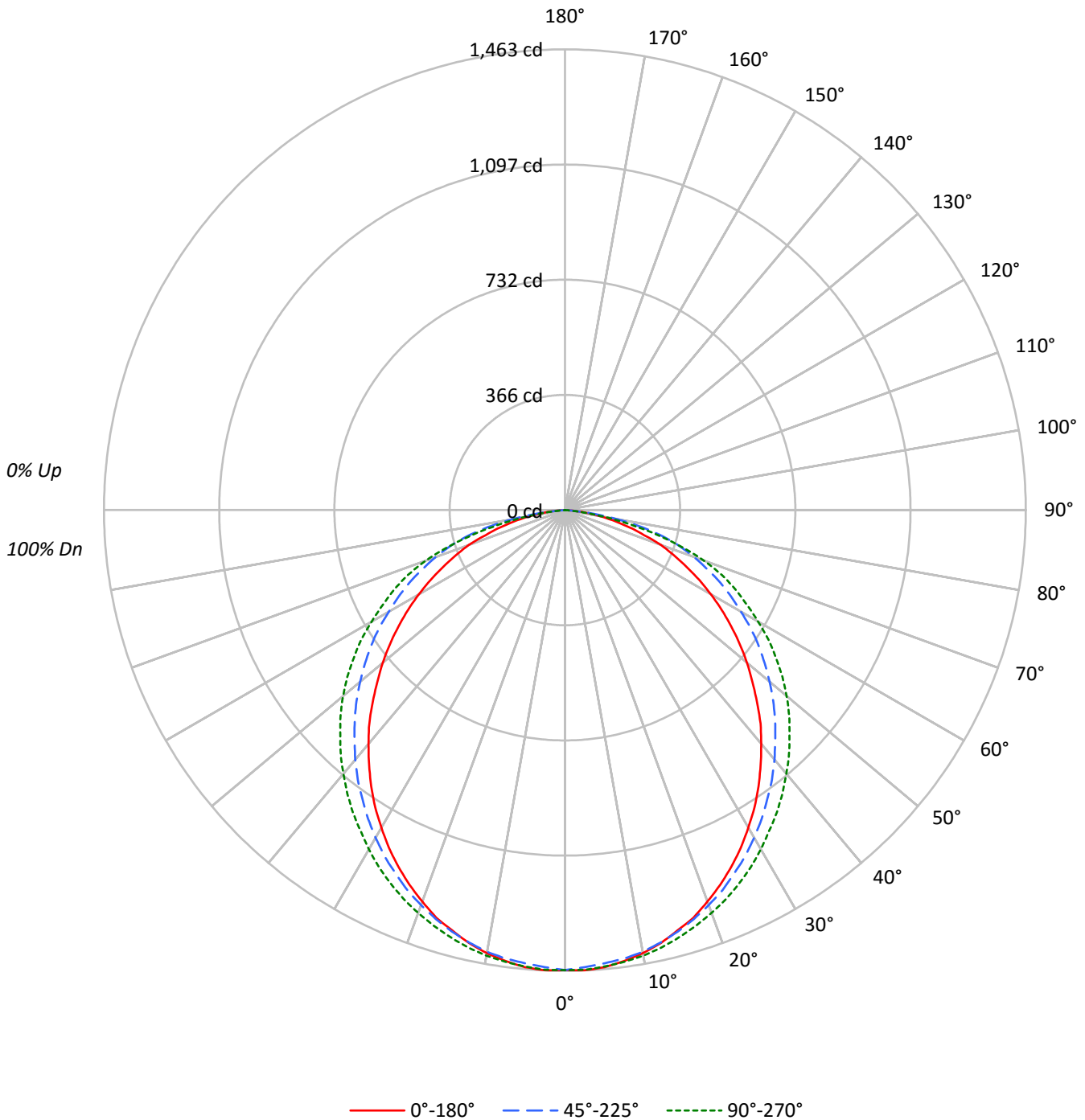
Input Watts (W): 39.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3931	3931	3931
5°	3935	3902	3930
10°	3903	3892	3925
15°	3849	3860	3911
20°	3788	3823	3899
25°	3711	3777	3885
30°	3619	3732	3865
35°	3519	3679	3852
40°	3407	3635	3842
45°	3282	3590	3837
50°	3159	3551	3848
55°	3027	3522	3836
60°	2883	3472	3811
65°	2713	3462	3811
70°	2554	3432	3703
75°	2215	3354	3164
80°	1791	2704	2106
85°	1189	939	627



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.9	3.4
10°-20°	392.5	9.6
20°-30°	588.8	14.4
30°-40°	702.4	17.2
40°-50°	726.1	17.7
50°-60°	662.9	16.2
60°-70°	521.7	12.7
70°-80°	303.7	7.4
80°-90°	56.0	1.4
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°	1119.3	27.4
0°-40°	1821.6	44.5
0°-60°	3210.7	78.5
0°-90°	4092.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4092.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1461	1461	1461	1461	1461	
5°	1457	1453	1444	1457	1455	138
15°	1382	1384	1386	1404	1404	390
25°	1250	1256	1272	1302	1309	575
35°	1071	1085	1120	1162	1173	670
45°	862	891	943	996	1008	666
55°	645	680	751	806	818	577
65°	426	471	544	586	598	423
75°	213	264	323	316	304	226
85°	38	55	30	24	20	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1460.8	1460.8	1460.8	1460.8	1460.8
2.5°	1462.8	1458.7	1452.7	1462.8	1460.8
5°	1456.7	1452.7	1444.5	1456.7	1454.7
7.5°	1444.5	1440.5	1436.4	1448.6	1446.6
10°	1428.3	1426.3	1424.3	1438.5	1436.4
12.5°	1408.0	1408.0	1406.0	1422.2	1422.2
15°	1381.7	1383.7	1385.7	1404.0	1404.0
17.5°	1357.3	1355.3	1361.4	1381.7	1383.7
20°	1322.8	1326.9	1335.0	1359.3	1361.4
22.5°	1288.3	1292.4	1306.6	1330.9	1337.0
25°	1249.8	1255.9	1272.1	1302.5	1308.6
27.5°	1209.2	1217.3	1239.6	1272.1	1278.2
30°	1164.6	1176.7	1201.1	1237.6	1243.7
32.5°	1119.9	1132.1	1162.5	1199.1	1207.2
35°	1071.2	1085.4	1119.9	1162.5	1172.7
37.5°	1020.5	1038.8	1079.4	1122.0	1134.1
40°	969.8	990.1	1034.7	1079.4	1093.6
42.5°	919.1	939.4	988.1	1038.8	1053.0
45°	862.3	890.7	943.4	996.2	1008.3
47.5°	807.5	837.9	896.8	949.5	965.7
50°	754.7	785.2	848.1	902.8	919.1
52.5°	700.0	732.4	799.4	856.2	870.4
55°	645.2	679.7	750.7	805.5	817.6
57.5°	590.4	626.9	700.0	752.7	766.9
60°	535.6	574.2	645.2	697.9	708.1
62.5°	480.8	521.4	594.5	641.1	651.3
65°	426.1	470.7	543.7	586.3	598.5
67.5°	373.3	417.9	489.0	529.5	539.7
70°	324.6	365.2	436.2	466.6	470.7
72.5°	263.8	314.5	383.5	399.7	389.5
75°	213.0	263.8	322.6	316.5	304.3
77.5°	162.3	213.0	251.6	231.3	215.1
80°	115.6	166.4	174.5	144.0	135.9
82.5°	75.1	115.6	97.4	75.1	60.9
85°	38.5	54.8	30.4	24.3	20.3
87.5°	12.2	8.1	4.1	4.1	2.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)