

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: P312111

Luminaire Tested: **14FCZ2-39-UNV-L83050-RDP-CP250-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: P312111
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-43)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-39-UNV-L83050-RDP-CP250-W2A-U-3500K
Description: 1'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT , 0.250" POLYCARB 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: 2214.0 lumens
Efficiency: N/A
Efficacy: 66.5 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.29 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

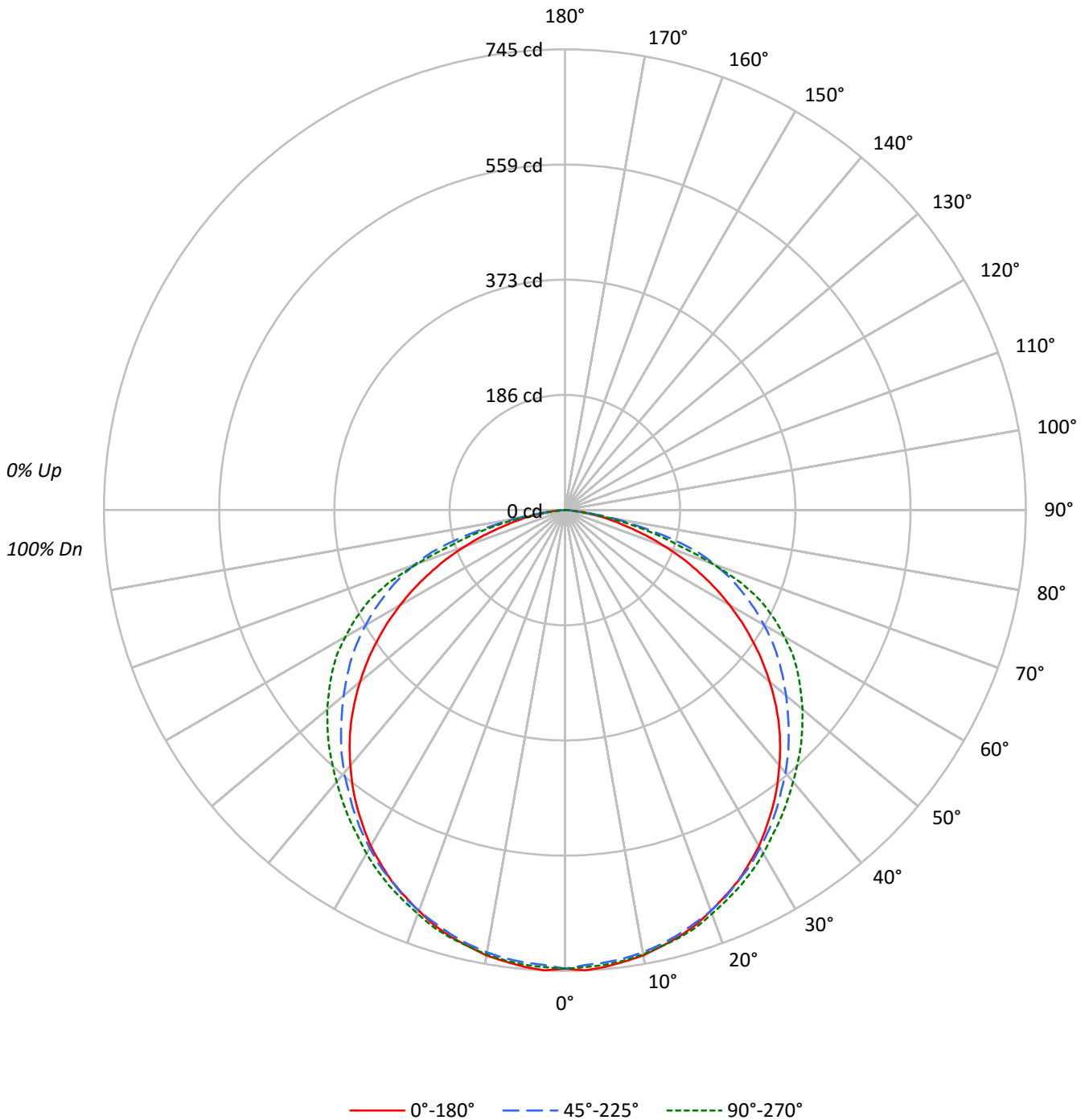
Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	91	88	90	88	86	84
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	63	74	68	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	53	66	58	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	50	42	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	25	51	38	31	25	37	30	25	36	30	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1995	1995	1995
5°	2003	1984	1994
10°	1998	1984	1993
15°	1989	1979	1994
20°	1975	1975	1990
25°	1966	1966	1991
30°	1950	1960	1993
35°	1925	1953	1999
40°	1894	1949	2016
45°	1862	1947	2052
50°	1809	1954	2099
55°	1743	1979	2157
60°	1656	2000	2205
65°	1530	2025	2234
70°	1360	2040	1999
75°	1096	1833	1599
80°	857	1286	1044
85°	587	374	266



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.2	3.2
10°-20°	201.4	9.1
20°-30°	306.6	13.8
30°-40°	373.5	16.9
40°-50°	396.2	17.9
50°-60°	373.9	16.9
60°-70°	301.9	13.6
70°-80°	163.8	7.4
80°-90°	26.5	1.2
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°	578.2	26.1
0°-40°	951.6	43.0
0°-60°	1721.8	77.8
0°-90°	2214.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2214.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	742	742	742	742	742	
5°	742	740	735	740	738	70
15°	714	712	710	716	716	201
25°	662	660	662	669	671	305
35°	586	589	595	607	608	366
45°	489	496	512	531	539	377
55°	372	387	422	449	460	332
65°	240	270	318	344	351	238
75°	105	154	176	159	154	115
85°	19	21	12	10	9	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	741.5	741.5	741.5	741.5	741.5
2.5°	745.0	741.5	736.3	741.5	739.8
5°	741.5	739.8	734.6	739.8	738.1
7.5°	736.3	736.3	731.2	734.6	734.6
10°	731.2	729.4	726.0	731.2	729.4
12.5°	722.5	720.8	719.1	724.2	722.5
15°	713.9	712.1	710.4	715.6	715.6
17.5°	703.5	701.8	700.0	707.0	707.0
20°	689.7	689.7	689.7	696.6	694.9
22.5°	675.8	675.8	677.6	684.5	682.8
25°	662.0	660.3	662.0	668.9	670.7
27.5°	644.7	646.5	648.2	655.1	656.8
30°	627.4	629.2	630.9	639.5	641.3
32.5°	606.7	610.2	613.6	624.0	624.0
35°	586.0	589.4	594.6	606.7	608.4
37.5°	563.5	566.9	573.9	587.7	591.1
40°	539.3	544.5	554.8	568.7	573.9
42.5°	515.1	522.0	534.1	549.7	556.6
45°	489.2	496.1	511.6	530.6	539.3
47.5°	461.5	470.2	489.2	513.4	520.3
50°	432.1	444.2	466.7	492.6	501.3
52.5°	402.7	416.6	444.2	471.9	480.5
55°	371.6	387.2	421.8	449.4	459.8
57.5°	340.5	357.8	397.6	426.9	437.3
60°	307.7	328.4	371.6	401.0	409.7
62.5°	274.8	299.0	345.7	375.1	382.0
65°	240.3	269.6	318.0	344.0	350.9
67.5°	207.4	242.0	290.4	309.4	309.4
70°	172.8	210.9	259.3	264.5	254.1
72.5°	138.3	181.5	224.7	205.7	197.0
75°	105.4	153.8	176.3	159.0	153.8
77.5°	79.5	124.5	124.5	114.1	110.6
80°	55.3	95.1	83.0	72.6	67.4
82.5°	36.3	53.6	43.2	34.6	29.4
85°	19.0	20.7	12.1	10.4	8.6
87.5°	6.9	3.5	1.7	3.5	1.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)