

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: P312293

Luminaire Tested: **14FCZ2-20-UNV-L83050-S-CA08-W2A-U-4500K**

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: P312293
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: 14FCZ2-20-UNV-L83050-S-CA08-W2A-U-4500K
Description: 1'X4' TROFFER LED MODULE,SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 4500K 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: 2152.0 lumens
Efficiency: N/A
Efficacy: 124.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.36
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

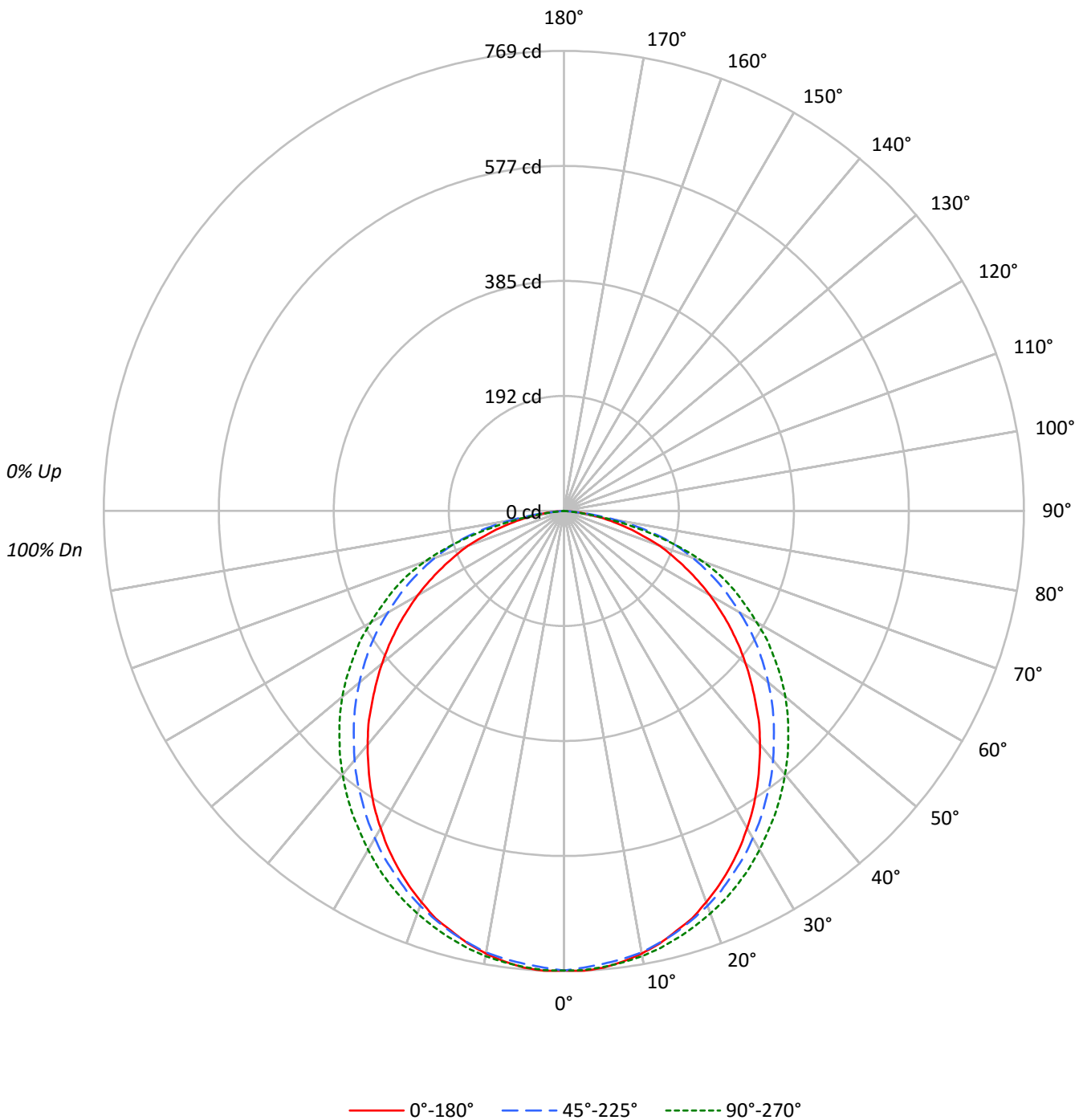
Input Watts (W): 17.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2067	2067	2067
5°	2069	2052	2066
10°	2053	2047	2064
15°	2024	2030	2057
20°	1992	2011	2050
25°	1952	1986	2043
30°	1903	1963	2032
35°	1851	1935	2026
40°	1792	1912	2020
45°	1726	1888	2018
50°	1662	1867	2023
55°	1592	1852	2017
60°	1516	1826	2004
65°	1427	1821	2004
70°	1343	1805	1947
75°	1164	1764	1664
80°	942	1423	1108
85°	627	494	330



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.5	3.4
10°-20°	206.4	9.6
20°-30°	309.6	14.4
30°-40°	369.4	17.2
40°-50°	381.9	17.7
50°-60°	348.6	16.2
60°-70°	274.4	12.7
70°-80°	159.7	7.4
80°-90°	29.4	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°	588.6	27.4
0°-40°	958.0	44.5
0°-60°	1688.5	78.5
0°-90°	2152.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2152.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	768	768	768	768	768	
5°	766	764	760	766	765	73
15°	727	728	729	738	738	205
25°	657	660	669	685	688	303
35°	563	571	589	611	617	352
45°	454	468	496	524	530	350
55°	339	357	395	424	430	303
65°	224	248	286	308	315	223
75°	112	139	170	166	160	119
85°	20	29	16	13	11	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	768.2	768.2	768.2	768.2	768.2
2.5°	769.3	767.2	764.0	769.3	768.2
5°	766.1	764.0	759.7	766.1	765.0
7.5°	759.7	757.6	755.4	761.8	760.8
10°	751.2	750.1	749.0	756.5	755.4
12.5°	740.5	740.5	739.4	748.0	748.0
15°	726.6	727.7	728.7	738.4	738.4
17.5°	713.8	712.7	715.9	726.6	727.7
20°	695.7	697.8	702.1	714.9	715.9
22.5°	677.5	679.7	687.1	699.9	703.1
25°	657.3	660.5	669.0	685.0	688.2
27.5°	635.9	640.2	651.9	669.0	672.2
30°	612.4	618.9	631.7	650.9	654.1
32.5°	589.0	595.4	611.4	630.6	634.9
35°	563.4	570.8	589.0	611.4	616.7
37.5°	536.7	546.3	567.6	590.0	596.4
40°	510.0	520.7	544.2	567.6	575.1
42.5°	483.3	494.0	519.6	546.3	553.8
45°	453.5	468.4	496.1	523.9	530.3
47.5°	424.7	440.7	471.6	499.3	507.9
50°	396.9	412.9	446.0	474.8	483.3
52.5°	368.1	385.2	420.4	450.3	457.7
55°	339.3	357.4	394.8	423.6	430.0
57.5°	310.5	329.7	368.1	395.9	403.3
60°	281.7	302.0	339.3	367.0	372.4
62.5°	252.9	274.2	312.6	337.2	342.5
65°	224.1	247.5	286.0	308.4	314.8
67.5°	196.3	219.8	257.1	278.5	283.8
70°	170.7	192.1	229.4	245.4	247.5
72.5°	138.7	165.4	201.7	210.2	204.9
75°	112.0	138.7	169.7	166.4	160.0
77.5°	85.4	112.0	132.3	121.6	113.1
80°	60.8	87.5	91.8	75.8	71.5
82.5°	39.5	60.8	51.2	39.5	32.0
85°	20.3	28.8	16.0	12.8	10.7
87.5°	6.4	4.3	2.1	2.1	1.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)