

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: P312290

Luminaire Tested: **14FCZ2-20-UNV-L83050-S-CA08-W2A-U-3000K**

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: P312290
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-3000K
Description: 1'X4' TROFFER LED MODULE,SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 3000K 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: 1918.0 lumens
Efficiency: N/A
Efficacy: 116.2 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

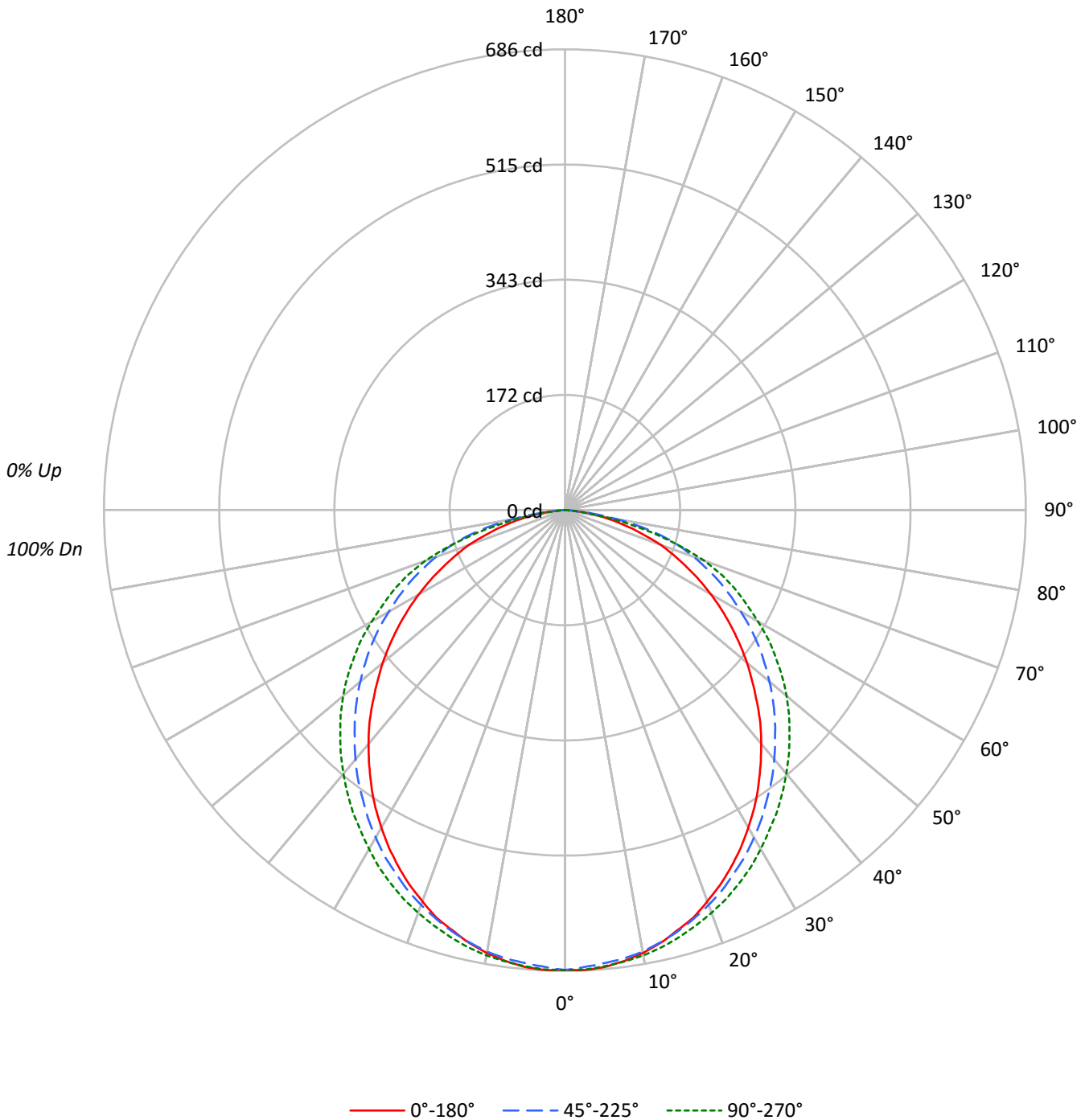
Input Watts (W): 16.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P312290

CATALOG NUMBER: 14FCZ2-20-UNV-L83050-S-CA08-W2A-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P312290

CATALOG NUMBER: 14FCZ2-20-UNV-L83050-S-CA08-W2A-U-3000K

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°	1843	1843	1843
5°	1844	1829	1842
10°	1829	1824	1840
15°	1804	1809	1833
20°	1775	1792	1827
25°	1739	1771	1821
30°	1696	1749	1811
35°	1649	1724	1806
40°	1597	1704	1801
45°	1538	1683	1799
50°	1481	1664	1804
55°	1419	1651	1798
60°	1351	1628	1786
65°	1272	1623	1786
70°	1197	1609	1736
75°	1039	1572	1483
80°	840	1268	987
85°	559	442	293



TEST NUMBER: P312290

CATALOG NUMBER: 14FCZ2-20-UNV-L83050-S-CA08-W2A-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.7	3.4
10°-20°	184.0	9.6
20°-30°	276.0	14.4
30°-40°	329.2	17.2
40°-50°	340.3	17.7
50°-60°	310.7	16.2
60°-70°	244.5	12.7
70°-80°	142.3	7.4
80°-90°	26.2	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°	524.6	27.4
0°-40°	853.8	44.5
0°-60°	1504.9	78.5
0°-90°	1918.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1918.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	685	685	685	685	685	
5°	683	681	677	683	682	65
15°	648	649	650	658	658	183
25°	586	589	596	610	613	270
35°	502	509	525	545	550	314
45°	404	418	442	467	473	312
55°	302	319	352	378	383	270
65°	200	221	255	275	280	198
75°	100	124	151	148	143	106
85°	18	26	14	11	10	23
90°	0	0	0	0	0	



TEST NUMBER: P312290

CATALOG NUMBER: 14FCZ2-20-UNV-L83050-S-CA08-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	684.7	684.7	684.7	684.7	684.7
2.5°	685.6	683.7	680.9	685.6	684.7
5°	682.8	680.9	677.1	682.8	681.8
7.5°	677.1	675.2	673.3	679.0	678.0
10°	669.5	668.5	667.6	674.2	673.3
12.5°	660.0	660.0	659.0	666.6	666.6
15°	647.6	648.6	649.5	658.1	658.1
17.5°	636.2	635.2	638.1	647.6	648.6
20°	620.0	621.9	625.7	637.1	638.1
22.5°	603.9	605.8	612.4	623.8	626.7
25°	585.8	588.6	596.3	610.5	613.4
27.5°	566.8	570.6	581.0	596.3	599.1
30°	545.9	551.6	563.0	580.1	582.9
32.5°	524.9	530.6	544.9	562.0	565.8
35°	502.1	508.8	524.9	544.9	549.7
37.5°	478.3	486.9	505.9	525.9	531.6
40°	454.6	464.1	485.0	505.9	512.6
42.5°	430.8	440.3	463.1	486.9	493.6
45°	404.2	417.5	442.2	466.9	472.6
47.5°	378.5	392.7	420.3	445.1	452.7
50°	353.8	368.0	397.5	423.2	430.8
52.5°	328.1	343.3	374.7	401.3	408.0
55°	302.4	318.6	351.9	377.5	383.2
57.5°	276.7	293.8	328.1	352.8	359.5
60°	251.1	269.1	302.4	327.1	331.9
62.5°	225.4	244.4	278.6	300.5	305.3
65°	199.7	220.6	254.9	274.8	280.5
67.5°	175.0	195.9	229.2	248.2	253.0
70°	152.2	171.2	204.5	218.7	220.6
72.5°	123.6	147.4	179.7	187.3	182.6
75°	99.9	123.6	151.2	148.4	142.6
77.5°	76.1	99.9	117.9	108.4	100.8
80°	54.2	78.0	81.8	67.5	63.7
82.5°	35.2	54.2	45.6	35.2	28.5
85°	18.1	25.7	14.3	11.4	9.5
87.5°	5.7	3.8	1.9	1.9	1.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)