

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: P312157

Luminaire Tested: **14FCZ2-20-UNV-L83050-CP187-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: P312157
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-49)
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-CP187-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE,RIBBED LENS, 0.187" 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

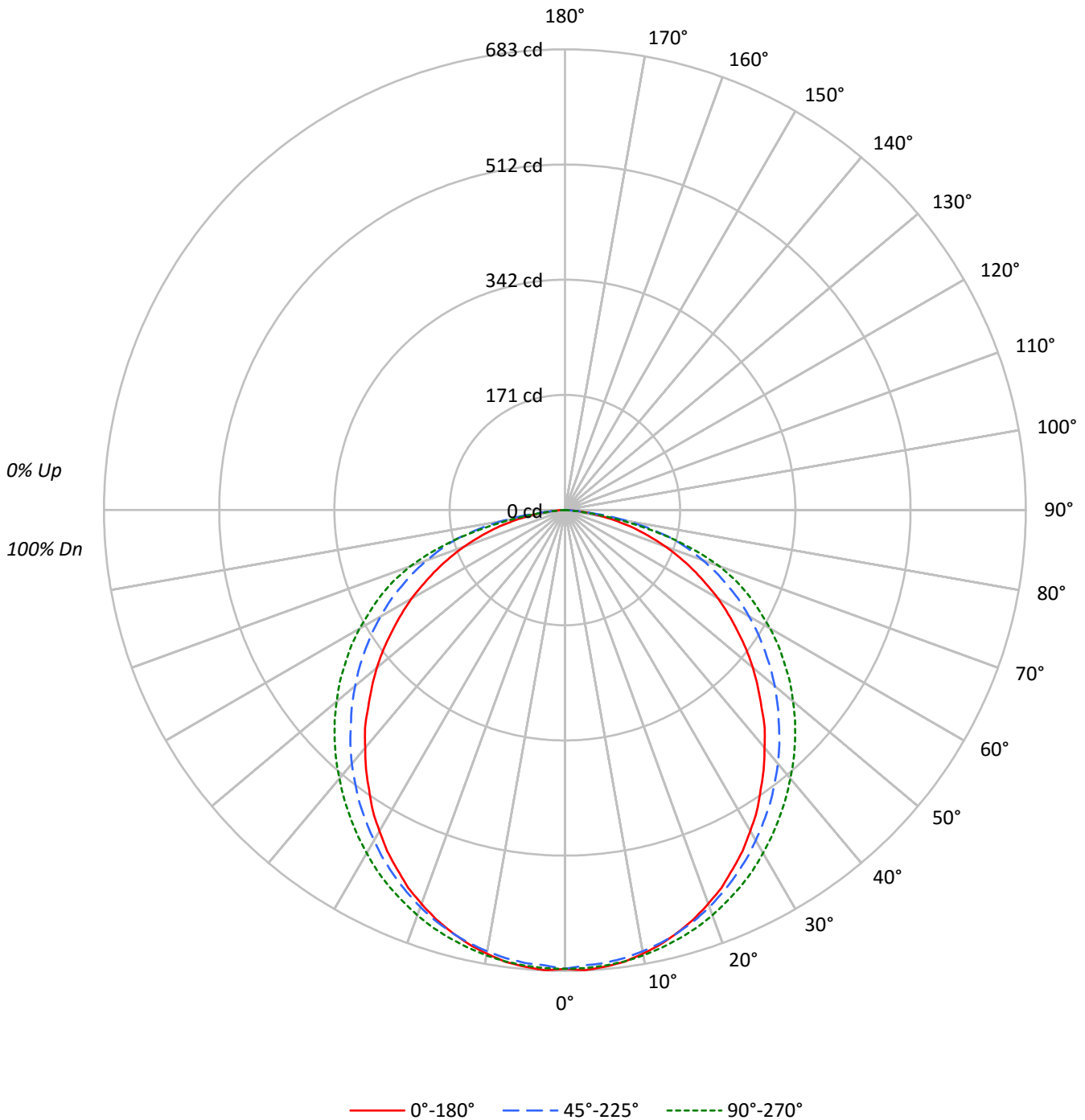
Lumens per Lamp: N/A
Luminaire Lumens: 1974.0 lumens
Efficiency: N/A
Efficacy: 116.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 16.9
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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CATALOG NUMBER: 14FC22-20-UNV-L83050-CP187-W2A-U-4000K

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	99	95	106	101	97	94	97	94	91	93	90	88	90	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	79	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	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1830	1830	1830
5°	1836	1820	1831
10°	1824	1815	1832
15°	1805	1806	1831
20°	1779	1794	1830
25°	1745	1776	1828
30°	1707	1757	1825
35°	1661	1742	1823
40°	1617	1725	1826
45°	1568	1707	1836
50°	1522	1699	1848
55°	1464	1693	1865
60°	1412	1696	1890
65°	1340	1701	1920
70°	1257	1714	1918
75°	1140	1730	1734
80°	934	1494	1235
85°	692	707	284



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.3	3.3
10°-20°	183.8	9.3
20°-30°	276.9	14.0
30°-40°	332.3	16.8
40°-50°	346.3	17.5
50°-60°	320.6	16.2
60°-70°	259.1	13.1
70°-80°	158.0	8.0
80°-90°	32.6	1.7
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°	525.1	26.6
0°-40°	857.4	43.4
0°-60°	1524.4	77.2
0°-90°	1974.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1974.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	680	680	680	680	680	
5°	680	678	674	679	678	65
15°	648	648	648	657	657	183
25°	588	591	598	613	616	271
35°	506	514	530	550	555	317
45°	412	424	448	474	482	318
55°	312	328	361	389	398	280
65°	210	231	267	294	302	208
75°	110	134	166	169	167	115
85°	22	34	23	13	9	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	680.0	680.0	680.0	680.0	680.0
2.5°	682.7	680.5	675.6	680.5	679.6
5°	679.6	677.8	673.9	678.7	677.8
7.5°	675.2	673.4	669.9	675.6	674.8
10°	667.7	666.8	664.2	670.8	670.4
12.5°	658.9	658.5	657.2	664.6	664.2
15°	647.9	648.4	648.4	657.2	657.2
17.5°	635.6	636.5	638.2	647.9	649.2
20°	621.1	622.8	626.3	637.4	639.1
22.5°	606.1	607.4	612.7	625.9	627.7
25°	587.6	591.1	598.2	613.1	615.8
27.5°	570.0	573.1	582.8	598.2	602.6
30°	549.3	554.2	565.6	582.3	587.2
32.5°	529.5	534.8	548.0	567.4	571.8
35°	505.7	513.7	530.4	549.8	555.0
37.5°	484.2	491.7	510.6	531.7	537.9
40°	460.4	469.7	491.2	513.7	519.8
42.5°	438.4	447.2	470.5	493.4	501.8
45°	412.0	424.3	448.5	473.6	482.4
47.5°	387.8	400.1	427.8	454.7	462.6
50°	363.6	376.8	405.8	433.6	441.5
52.5°	338.5	352.6	383.8	411.6	420.8
55°	312.1	328.4	360.9	389.1	397.5
57.5°	287.0	303.7	338.5	367.1	375.5
60°	262.3	279.5	315.2	342.4	351.2
62.5°	235.0	255.3	292.3	319.1	325.7
65°	210.4	231.1	267.2	294.0	301.5
67.5°	184.4	206.9	243.0	267.6	274.7
70°	159.8	183.1	217.9	240.8	243.8
72.5°	133.4	157.1	192.4	206.9	206.9
75°	109.6	133.8	166.4	169.0	166.8
77.5°	83.6	110.5	131.6	126.3	121.0
80°	60.3	86.7	96.4	86.7	79.7
82.5°	40.5	62.9	58.1	46.2	40.9
85°	22.4	33.5	22.9	12.8	9.2
87.5°	8.4	7.5	2.2	2.2	2.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)