

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: P312155

Luminaire Tested: **14FCZ2-20-UNV-L83050-CP187-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: P312155
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-3000K
Description: 1'X4' TROFFER LED MODULE,RIBBED LENS, 0.187" POLYCARB 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

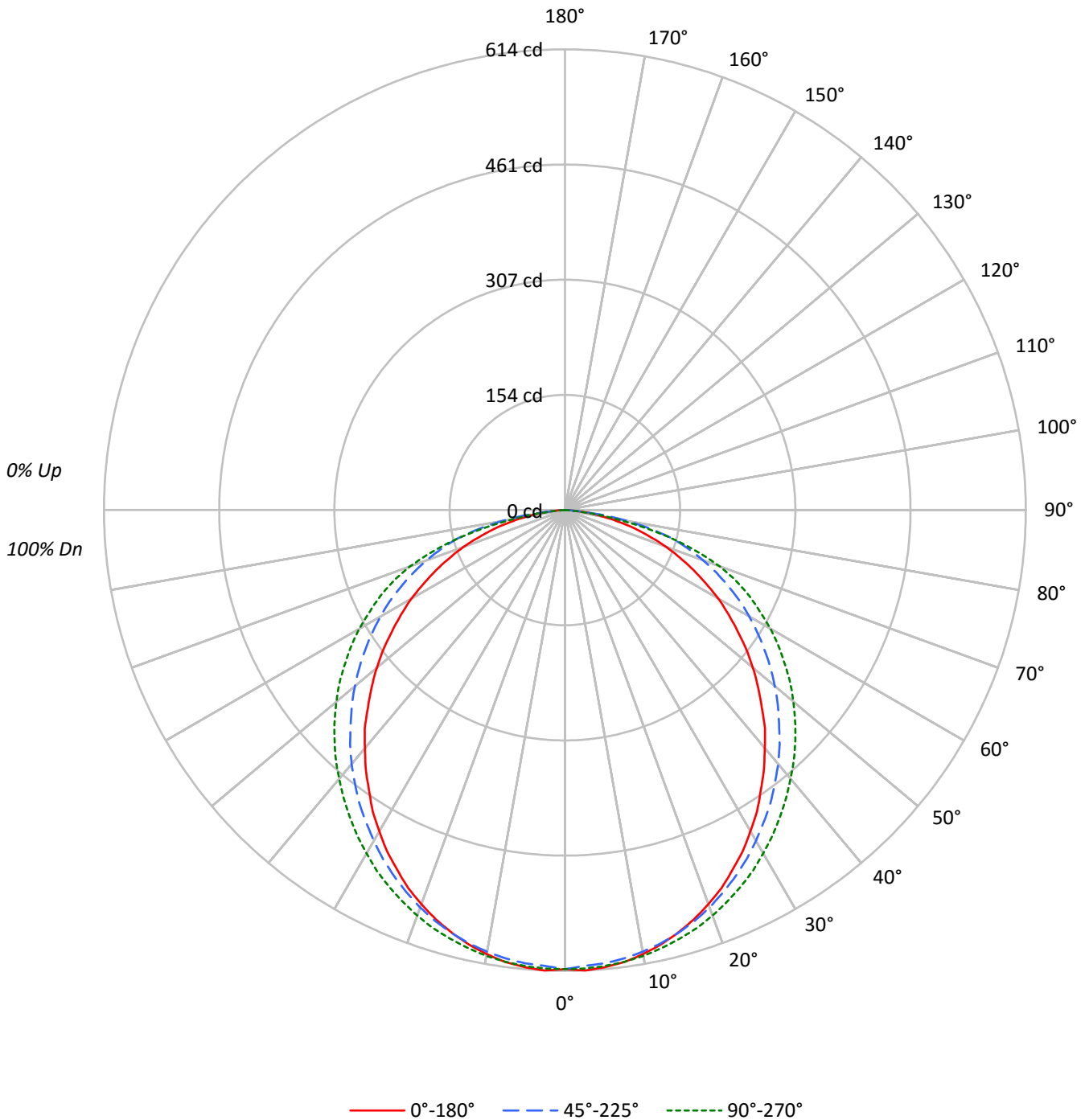
Lumens per Lamp: N/A
Luminaire Lumens: 1776.0 lumens
Efficiency: N/A
Efficacy: 107.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 16.5
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: P312155
CATALOG NUMBER: 14FCZ2-20-UNV-L83050-CP187-W2A-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P312155

CATALOG NUMBER: 14FC22-20-UNV-L83050-CP187-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	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°	1646	1646	1646
5°	1652	1638	1647
10°	1641	1633	1648
15°	1624	1625	1647
20°	1600	1614	1647
25°	1570	1598	1645
30°	1536	1581	1642
35°	1495	1568	1641
40°	1455	1552	1643
45°	1411	1536	1652
50°	1369	1528	1663
55°	1317	1523	1678
60°	1270	1526	1701
65°	1205	1531	1727
70°	1131	1542	1726
75°	1025	1556	1561
80°	841	1344	1111
85°	624	636	256



TEST NUMBER: P312155

CATALOG NUMBER: 14FCZ2-20-UNV-L83050-CP187-W2A-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.9	3.3
10°-20°	165.4	9.3
20°-30°	249.1	14.0
30°-40°	299.0	16.8
40°-50°	311.6	17.5
50°-60°	288.5	16.2
60°-70°	233.1	13.1
70°-80°	142.1	8.0
80°-90°	29.3	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°	472.4	26.6
0°-40°	771.4	43.4
0°-60°	1371.4	77.2
0°-90°	1776.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1776.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	612	612	612	612	612	
5°	611	610	606	611	610	58
15°	583	583	583	591	591	164
25°	529	532	538	552	554	244
35°	455	462	477	495	499	285
45°	371	382	404	426	434	287
55°	281	295	325	350	358	252
65°	189	208	240	264	271	187
75°	99	120	150	152	150	104
85°	20	30	21	12	8	25
90°	0	0	0	0	0	



TEST NUMBER: P312155

CATALOG NUMBER: 14FCZ2-20-UNV-L83050-CP187-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	611.8	611.8	611.8	611.8	611.8
2.5°	614.2	612.2	607.9	612.2	611.4
5°	611.4	609.9	606.3	610.6	609.9
7.5°	607.5	605.9	602.7	607.9	607.1
10°	600.7	600.0	597.6	603.5	603.1
12.5°	592.8	592.4	591.2	598.0	597.6
15°	582.9	583.3	583.3	591.2	591.2
17.5°	571.8	572.6	574.2	582.9	584.1
20°	558.8	560.4	563.5	573.4	575.0
22.5°	545.3	546.5	551.2	563.1	564.7
25°	528.7	531.8	538.2	551.6	554.0
27.5°	512.8	515.6	524.3	538.2	542.1
30°	494.2	498.6	508.9	523.9	528.3
32.5°	476.4	481.2	493.0	510.5	514.4
35°	455.0	462.1	477.2	494.6	499.4
37.5°	435.6	442.3	459.4	478.4	483.9
40°	414.2	422.5	441.9	462.1	467.7
42.5°	394.4	402.3	423.3	443.9	451.5
45°	370.7	381.8	403.5	426.1	434.0
47.5°	348.9	360.0	384.9	409.1	416.2
50°	327.1	339.0	365.1	390.1	397.2
52.5°	304.5	317.2	345.3	370.3	378.6
55°	280.8	295.4	324.7	350.1	357.6
57.5°	258.2	273.2	304.5	330.3	337.8
60°	236.0	251.5	283.5	308.1	316.0
62.5°	211.5	229.7	263.0	287.1	293.0
65°	189.3	207.9	240.4	264.5	271.3
67.5°	165.9	186.1	218.6	240.8	247.1
70°	143.8	164.7	196.0	216.6	219.4
72.5°	120.0	141.4	173.1	186.1	186.1
75°	98.6	120.4	149.7	152.1	150.1
77.5°	75.2	99.4	118.4	113.7	108.9
80°	54.3	78.0	86.7	78.0	71.7
82.5°	36.4	56.6	52.3	41.6	36.8
85°	20.2	30.1	20.6	11.5	8.3
87.5°	7.5	6.7	2.0	2.0	2.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)