

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: P311855

Luminaire Tested: **14FCZ2-20-UNV-L83050-HRP-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: P311855
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-18)
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-HRP-CP187-W2A-U-3000K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 1347.0 lumens
Efficiency: N/A
Efficacy: 81.6 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.29 / 1.39
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

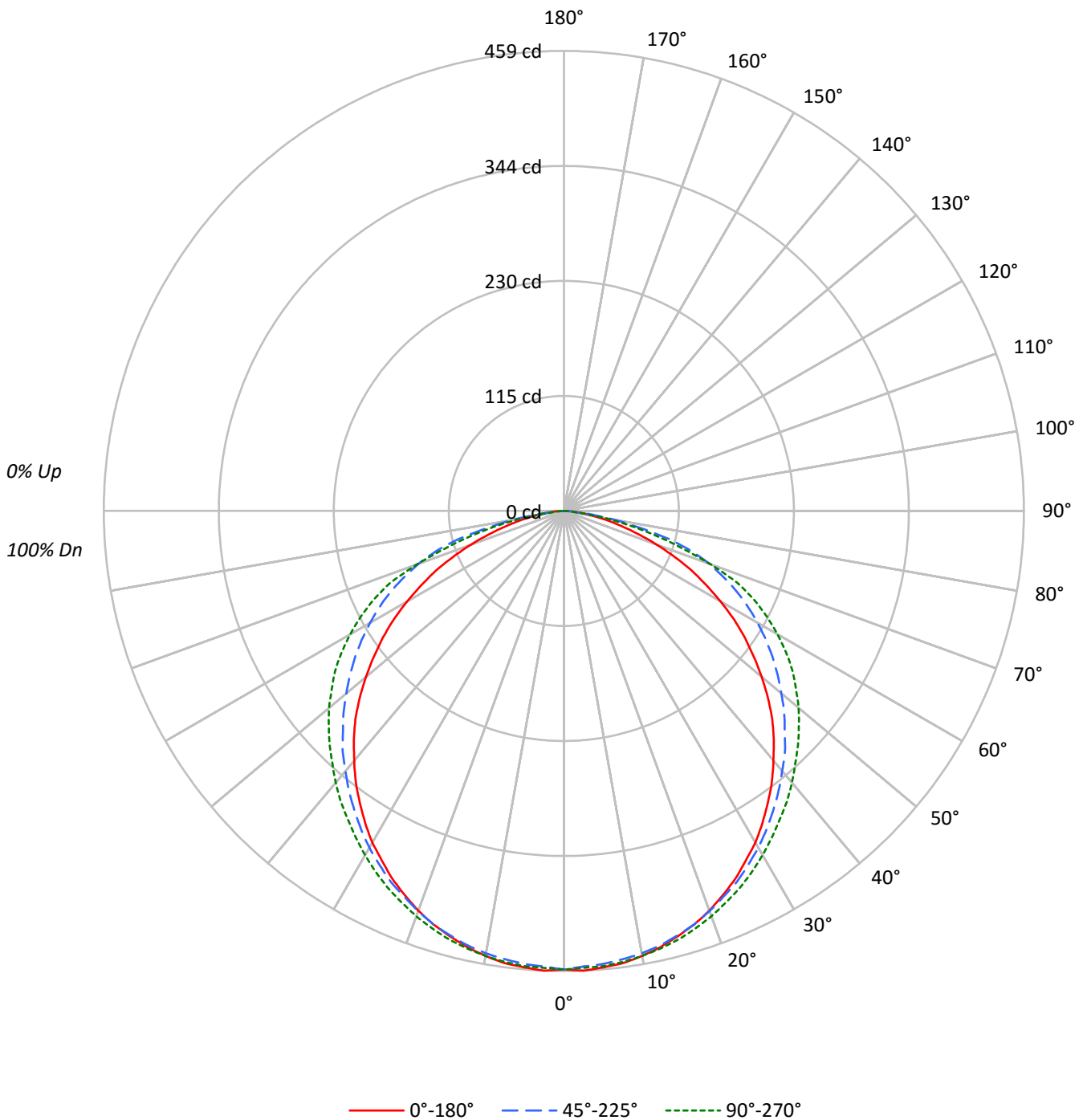
Input Watts (W): 16.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P311855

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

Luminous Intensity Polar Plot





TEST NUMBER: P311855

CATALOG NUMBER: 14FC22-20-UNV-L83050-HRP-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	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	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	38	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1231	1231	1231
5°	1234	1225	1231
10°	1232	1224	1232
15°	1224	1221	1233
20°	1215	1216	1232
25°	1202	1212	1233
30°	1187	1206	1232
35°	1166	1197	1234
40°	1143	1190	1244
45°	1119	1186	1257
50°	1080	1186	1280
55°	1034	1192	1308
60°	971	1201	1324
65°	895	1214	1332
70°	780	1216	1227
75°	643	1132	991
80°	505	814	663
85°	392	315	157



TEST NUMBER: P311855

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.3	3.2
10°-20°	124.3	9.2
20°-30°	188.7	14.0
30°-40°	228.7	17.0
40°-50°	241.0	17.9
50°-60°	224.9	16.7
60°-70°	179.8	13.3
70°-80°	98.9	7.3
80°-90°	17.5	1.3
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°	356.3	26.5
0°-40°	585.0	43.4
0°-60°	1050.9	78.0
0°-90°	1347.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1347.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	457	457	457	457	457	
5°	457	456	454	457	456	43
15°	439	439	438	443	443	124
25°	405	406	408	414	415	186
35°	355	358	364	374	376	222
45°	294	300	312	326	330	226
55°	220	231	254	272	279	197
65°	141	158	191	206	209	138
75°	62	88	109	98	95	67
85°	13	16	10	6	5	15
90°	0	0	0	0	0	



TEST NUMBER: P311855

CATALOG NUMBER: 14FC22-20-UNV-L83050-HRP-CP187-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	457.4	457.4	457.4	457.4	457.4
2.5°	459.1	457.9	454.9	457.4	456.2
5°	457.0	455.8	453.6	456.6	455.8
7.5°	454.9	453.2	451.1	454.5	453.6
10°	450.7	449.4	448.1	451.1	450.7
12.5°	445.6	445.2	443.9	447.3	446.9
15°	439.2	439.2	438.4	442.6	442.6
17.5°	432.5	432.0	432.5	437.1	436.7
20°	424.4	424.4	424.8	430.3	430.3
22.5°	414.7	415.1	416.4	423.1	422.7
25°	404.9	405.8	408.3	414.2	415.1
27.5°	393.1	395.2	398.1	405.3	406.2
30°	382.1	383.3	388.0	394.8	396.5
32.5°	368.9	371.5	376.5	384.2	386.3
35°	354.9	358.3	364.3	373.6	375.7
37.5°	341.0	343.9	352.0	361.7	365.5
40°	325.3	330.4	338.9	349.9	354.1
42.5°	310.0	315.1	326.6	338.0	341.8
45°	294.0	299.5	311.7	325.7	330.4
47.5°	276.2	282.5	298.2	313.0	318.1
50°	257.9	266.0	283.4	299.9	305.8
52.5°	238.9	249.1	269.0	286.3	291.8
55°	220.3	231.3	254.1	271.9	278.7
57.5°	201.2	213.1	238.9	259.2	263.0
60°	180.4	194.8	223.2	241.0	246.1
62.5°	160.1	176.6	207.1	224.1	228.3
65°	140.6	158.4	190.6	206.3	209.2
67.5°	119.4	140.6	172.4	186.8	187.6
70°	99.1	123.7	154.6	161.4	155.9
72.5°	79.2	105.5	133.8	128.3	123.7
75°	61.8	88.5	108.9	97.8	95.3
77.5°	45.7	72.4	77.9	72.0	67.3
80°	32.6	57.2	52.5	44.9	42.8
82.5°	22.4	36.0	28.8	22.4	19.5
85°	12.7	16.1	10.2	6.4	5.1
87.5°	5.5	3.8	2.1	1.7	1.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)