

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: P312007

Luminaire Tested: **14FCZ2-20-UNV-L83050-RDP-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: P312007
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-43)
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-RDP-CP187-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT , 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: 1267.0 lumens
Efficiency: N/A
Efficacy: 75.0 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.28 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

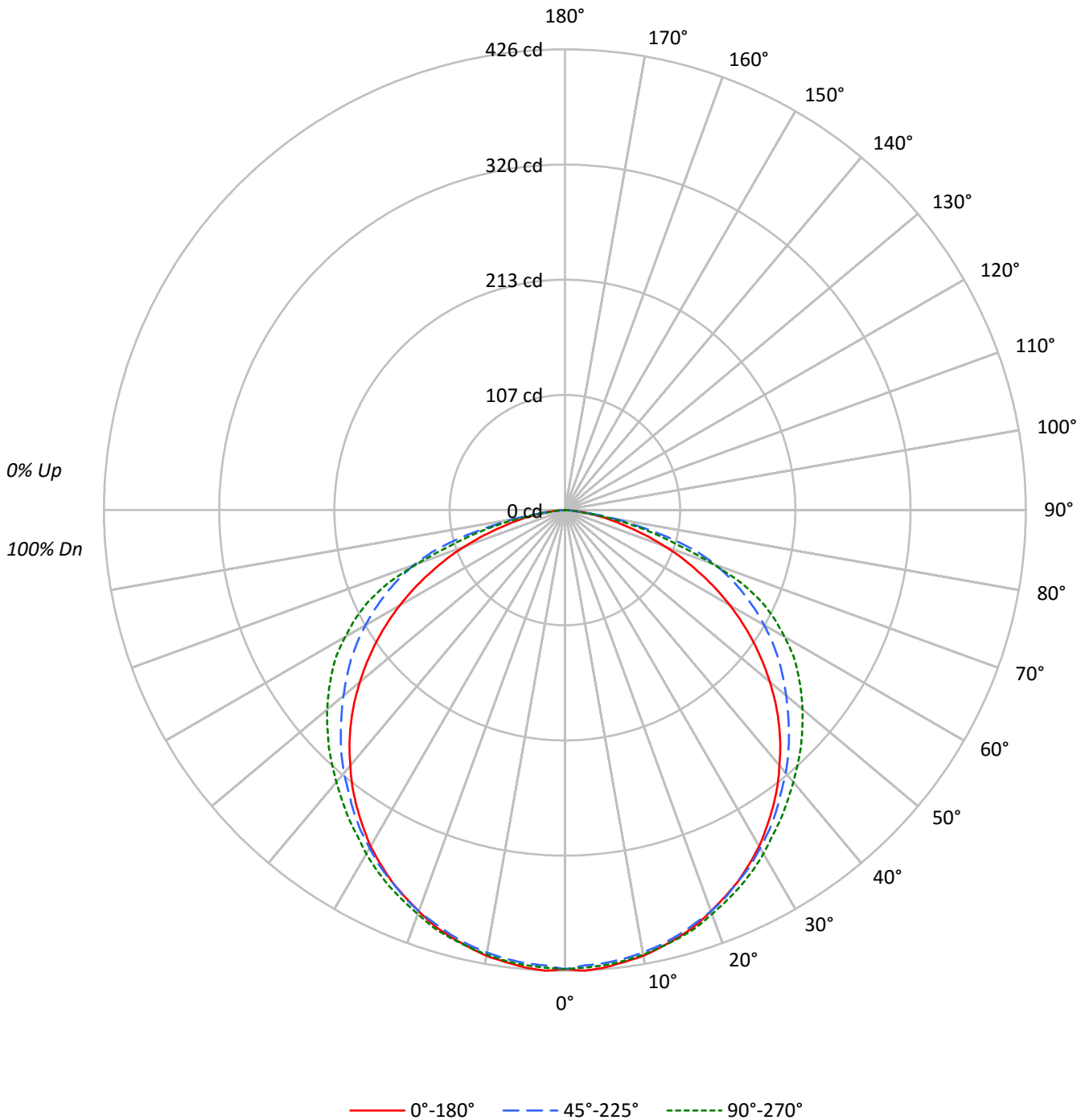
Input Watts (W): 16.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P312007

CATALOG NUMBER: 14FC22-20-UNV-L83050-RDP-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	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	63	74	68	62	71	66	61	69	64	60	58
4	82	70	61	54	80	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	50	42	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	25	51	38	31	25	37	30	25	36	30	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1142	1142	1142
5°	1146	1136	1141
10°	1143	1135	1141
15°	1138	1132	1141
20°	1130	1130	1139
25°	1125	1125	1140
30°	1116	1122	1140
35°	1101	1118	1144
40°	1084	1115	1154
45°	1065	1114	1174
50°	1035	1118	1201
55°	998	1133	1234
60°	948	1145	1262
65°	876	1159	1279
70°	778	1168	1144
75°	627	1049	915
80°	491	736	598
85°	337	213	151



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.2	3.2
10°-20°	115.2	9.1
20°-30°	175.5	13.8
30°-40°	213.7	16.9
40°-50°	226.7	17.9
50°-60°	214.0	16.9
60°-70°	172.8	13.6
70°-80°	93.7	7.4
80°-90°	15.2	1.2
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°	330.9	26.1
0°-40°	544.6	43.0
0°-60°	985.3	77.8
0°-90°	1267.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1267.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	424	424	424	424	424	
5°	424	423	420	423	422	40
15°	408	408	406	410	410	115
25°	379	378	379	383	384	174
35°	335	337	340	347	348	210
45°	280	284	293	304	309	216
55°	213	222	241	257	263	190
65°	138	154	182	197	201	136
75°	60	88	101	91	88	66
85°	11	12	7	6	5	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	424.4	424.4	424.4	424.4	424.4
2.5°	426.3	424.4	421.4	424.4	423.4
5°	424.4	423.4	420.4	423.4	422.4
7.5°	421.4	421.4	418.4	420.4	420.4
10°	418.4	417.4	415.4	418.4	417.4
12.5°	413.5	412.5	411.5	414.5	413.5
15°	408.5	407.5	406.5	409.5	409.5
17.5°	402.6	401.6	400.6	404.6	404.6
20°	394.7	394.7	394.7	398.6	397.6
22.5°	386.8	386.8	387.8	391.7	390.7
25°	378.8	377.9	378.8	382.8	383.8
27.5°	369.0	369.9	370.9	374.9	375.9
30°	359.1	360.1	361.0	366.0	367.0
32.5°	347.2	349.2	351.2	357.1	357.1
35°	335.3	337.3	340.3	347.2	348.2
37.5°	322.5	324.4	328.4	336.3	338.3
40°	308.6	311.6	317.5	325.4	328.4
42.5°	294.8	298.7	305.7	314.6	318.5
45°	279.9	283.9	292.8	303.7	308.6
47.5°	264.1	269.1	279.9	293.8	297.7
50°	247.3	254.2	267.1	281.9	286.9
52.5°	230.5	238.4	254.2	270.0	275.0
55°	212.7	221.6	241.4	257.2	263.1
57.5°	194.9	204.8	227.5	244.3	250.3
60°	176.1	187.9	212.7	229.5	234.4
62.5°	157.3	171.1	197.8	214.6	218.6
65°	137.5	154.3	182.0	196.8	200.8
67.5°	118.7	138.5	166.2	177.1	177.1
70°	98.9	120.7	148.4	151.3	145.4
72.5°	79.1	103.9	128.6	117.7	112.8
75°	60.3	88.0	100.9	91.0	88.0
77.5°	45.5	71.2	71.2	65.3	63.3
80°	31.7	54.4	47.5	41.5	38.6
82.5°	20.8	30.7	24.7	19.8	16.8
85°	10.9	11.9	6.9	5.9	4.9
87.5°	4.0	2.0	1.0	2.0	1.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)