

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: P312005

Luminaire Tested: **14FCZ2-20-UNV-L83050-RDP-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: P312005
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-3000K
Description: 1'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT , 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: 1140.0 lumens
Efficiency: N/A
Efficacy: 69.1 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.29 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

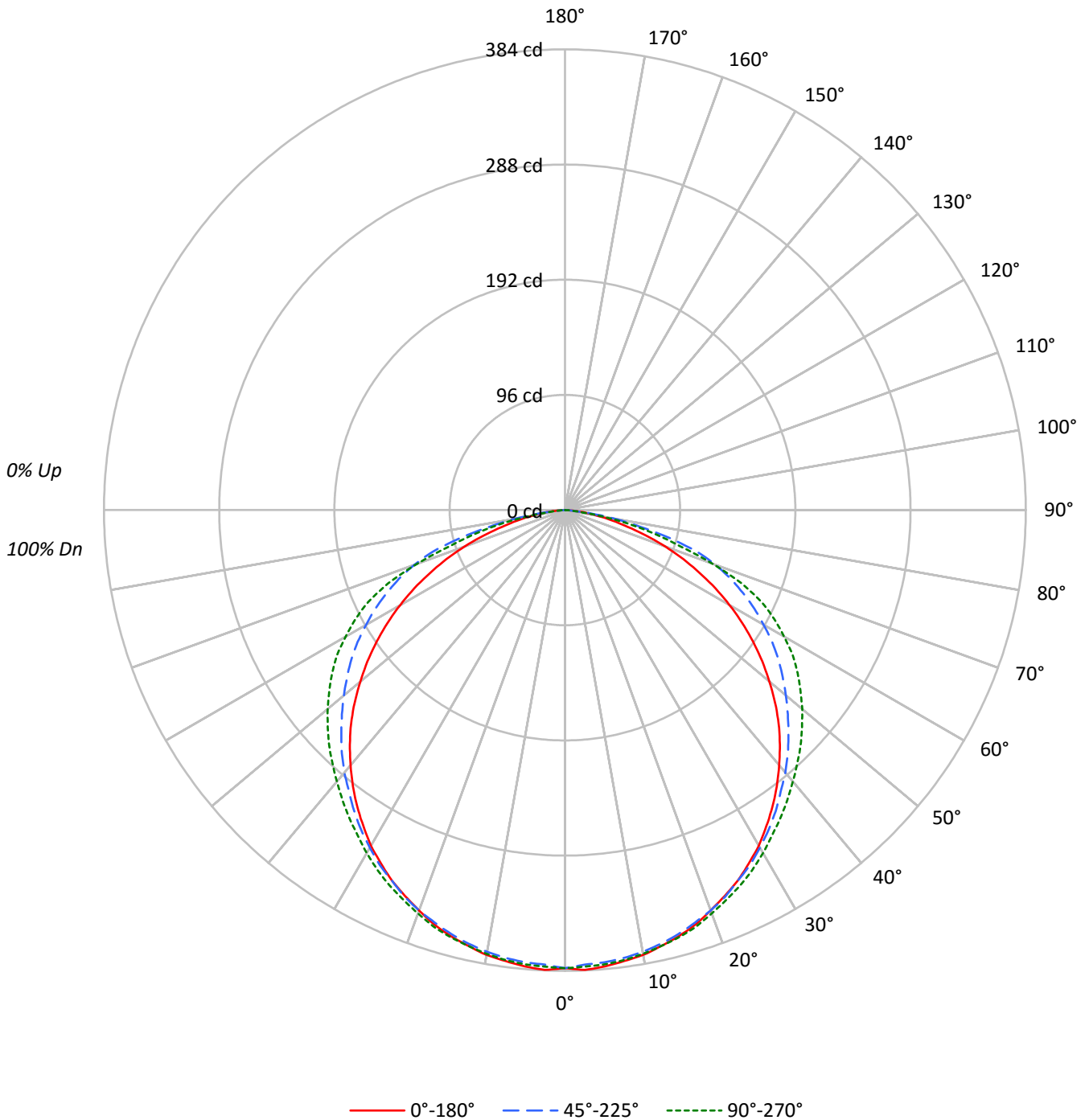
Input Watts (W): 16.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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°	1027	1027	1027
5°	1031	1022	1026
10°	1029	1021	1026
15°	1024	1019	1027
20°	1017	1017	1025
25°	1012	1012	1025
30°	1004	1010	1026
35°	991	1006	1029
40°	976	1004	1038
45°	959	1002	1057
50°	931	1006	1081
55°	898	1019	1110
60°	853	1030	1135
65°	788	1043	1151
70°	700	1050	1029
75°	565	944	823
80°	442	662	538
85°	303	191	139



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.1	3.2
10°-20°	103.7	9.1
20°-30°	157.9	13.8
30°-40°	192.3	16.9
40°-50°	204.0	17.9
50°-60°	192.5	16.9
60°-70°	155.5	13.6
70°-80°	84.3	7.4
80°-90°	13.7	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°	297.7	26.1
0°-40°	490.0	43.0
0°-60°	886.6	77.8
0°-90°	1140.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1140.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	382	382	382	382	382	
5°	382	381	378	381	380	36
15°	368	367	366	368	368	104
25°	341	340	341	344	345	157
35°	302	304	306	312	313	189
45°	252	255	263	273	278	194
55°	191	199	217	231	237	171
65°	124	139	164	177	181	123
75°	54	79	91	82	79	59
85°	10	11	6	5	4	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	381.8	381.8	381.8	381.8	381.8
2.5°	383.6	381.8	379.1	381.8	380.9
5°	381.8	380.9	378.3	380.9	380.0
7.5°	379.1	379.1	376.5	378.3	378.3
10°	376.5	375.6	373.8	376.5	375.6
12.5°	372.0	371.1	370.2	372.9	372.0
15°	367.6	366.7	365.8	368.5	368.5
17.5°	362.2	361.3	360.5	364.0	364.0
20°	355.1	355.1	355.1	358.7	357.8
22.5°	348.0	348.0	348.9	352.4	351.6
25°	340.9	340.0	340.9	344.4	345.3
27.5°	332.0	332.9	333.8	337.3	338.2
30°	323.1	324.0	324.9	329.3	330.2
32.5°	312.4	314.2	316.0	321.3	321.3
35°	301.7	303.5	306.2	312.4	313.3
37.5°	290.1	291.9	295.5	302.6	304.4
40°	277.7	280.4	285.7	292.8	295.5
42.5°	265.2	268.8	275.0	283.0	286.6
45°	251.9	255.4	263.4	273.2	277.7
47.5°	237.6	242.1	251.9	264.3	267.9
50°	222.5	228.7	240.3	253.7	258.1
52.5°	207.4	214.5	228.7	243.0	247.4
55°	191.4	199.4	217.2	231.4	236.7
57.5°	175.3	184.2	204.7	219.8	225.2
60°	158.4	169.1	191.4	206.5	210.9
62.5°	141.5	154.0	178.0	193.1	196.7
65°	123.7	138.8	163.8	177.1	180.7
67.5°	106.8	124.6	149.5	159.3	159.3
70°	89.0	108.6	133.5	136.2	130.8
72.5°	71.2	93.5	115.7	105.9	101.5
75°	54.3	79.2	90.8	81.9	79.2
77.5°	40.9	64.1	64.1	58.7	57.0
80°	28.5	49.0	42.7	37.4	34.7
82.5°	18.7	27.6	22.3	17.8	15.1
85°	9.8	10.7	6.2	5.3	4.5
87.5°	3.6	1.8	0.9	1.8	0.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)