

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: P312010

Luminaire Tested: **14FCZ2-20-UNV-L83050-RDP-CP250-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: P312010
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-CP250-W2A-U-3000K
Description: 1'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT , 0.250" 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: 1131.0 lumens
Efficiency: N/A
Efficacy: 68.5 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

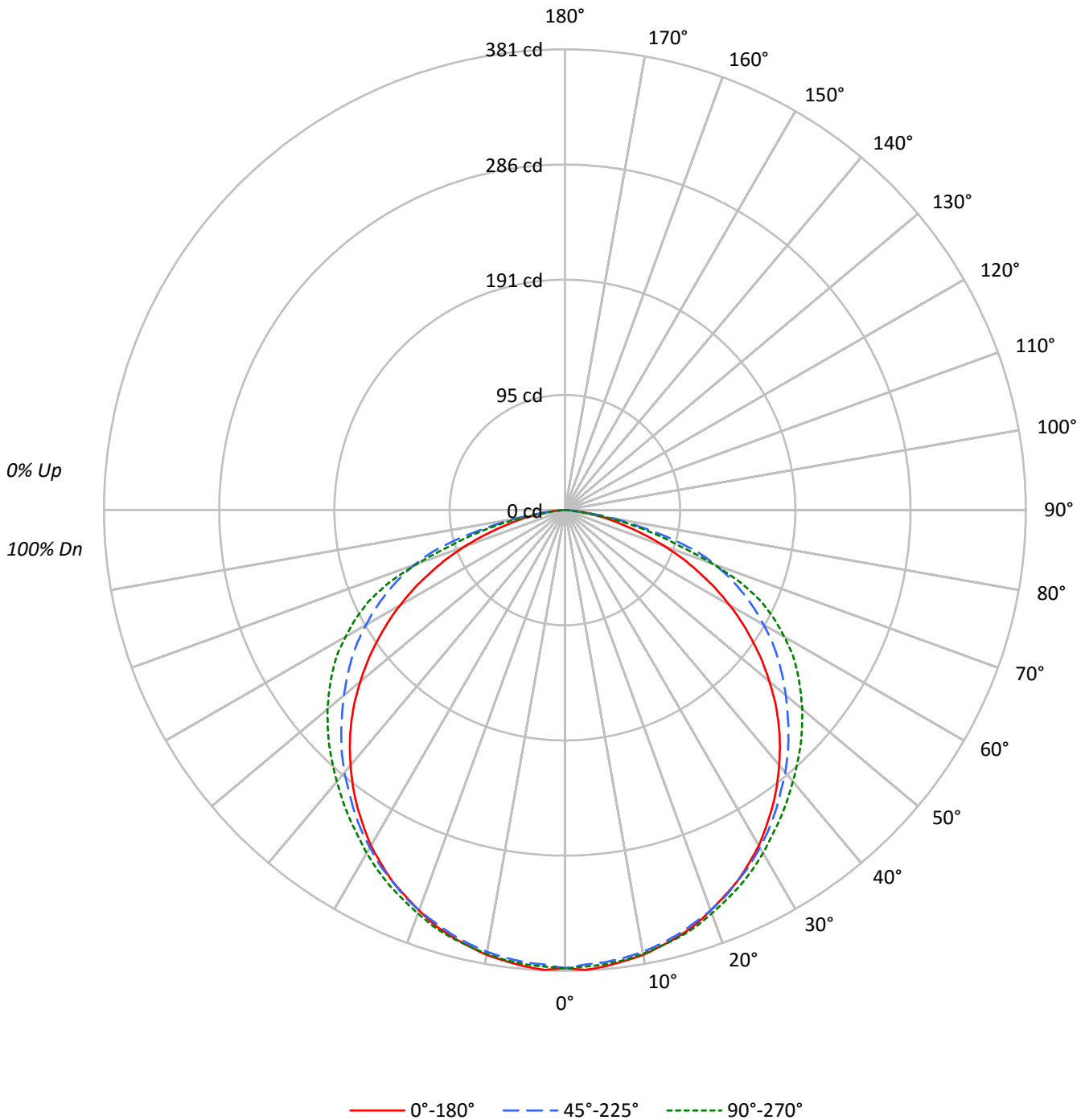
Input Watts (W): 16.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1019	1019	1019
5°	1023	1014	1018
10°	1021	1013	1018
15°	1016	1011	1019
20°	1009	1009	1017
25°	1004	1004	1017
30°	996	1001	1018
35°	983	998	1021
40°	968	996	1030
45°	951	995	1048
50°	924	998	1072
55°	890	1011	1102
60°	846	1021	1126
65°	781	1035	1141
70°	695	1042	1021
75°	560	937	817
80°	439	657	533
85°	299	191	136



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.9	3.2
10°-20°	102.9	9.1
20°-30°	156.6	13.8
30°-40°	190.8	16.9
40°-50°	202.4	17.9
50°-60°	191.0	16.9
60°-70°	154.2	13.6
70°-80°	83.7	7.4
80°-90°	13.6	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°	295.4	26.1
0°-40°	486.1	43.0
0°-60°	879.6	77.8
0°-90°	1131.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1131.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	379	379	379	379	379	
5°	379	378	375	378	377	36
15°	365	364	363	366	366	103
25°	338	337	338	342	343	156
35°	299	301	304	310	311	187
45°	250	253	261	271	276	192
55°	190	198	215	230	235	170
65°	123	138	162	176	179	122
75°	54	79	90	81	79	59
85°	10	11	6	5	4	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	378.8	378.8	378.8	378.8	378.8
2.5°	380.6	378.8	376.2	378.8	377.9
5°	378.8	377.9	375.3	377.9	377.0
7.5°	376.2	376.2	373.5	375.3	375.3
10°	373.5	372.6	370.9	373.5	372.6
12.5°	369.1	368.2	367.3	370.0	369.1
15°	364.7	363.8	362.9	365.6	365.6
17.5°	359.4	358.5	357.6	361.1	361.1
20°	352.3	352.3	352.3	355.8	355.0
22.5°	345.2	345.2	346.1	349.7	348.8
25°	338.2	337.3	338.2	341.7	342.6
27.5°	329.4	330.2	331.1	334.7	335.5
30°	320.5	321.4	322.3	326.7	327.6
32.5°	309.9	311.7	313.5	318.8	318.8
35°	299.3	301.1	303.7	309.9	310.8
37.5°	287.9	289.6	293.2	300.2	302.0
40°	275.5	278.1	283.4	290.5	293.2
42.5°	263.1	266.7	272.8	280.8	284.3
45°	249.9	253.4	261.4	271.1	275.5
47.5°	235.8	240.2	249.9	262.2	265.8
50°	220.7	226.9	238.4	251.7	256.1
52.5°	205.7	212.8	226.9	241.1	245.5
55°	189.8	197.8	215.4	229.6	234.9
57.5°	173.9	182.8	203.1	218.1	223.4
60°	157.2	167.8	189.8	204.9	209.3
62.5°	140.4	152.8	176.6	191.6	195.1
65°	122.7	137.7	162.5	175.7	179.2
67.5°	106.0	123.6	148.3	158.1	158.1
70°	88.3	107.7	132.4	135.1	129.8
72.5°	70.6	92.7	114.8	105.1	100.7
75°	53.9	78.6	90.1	81.2	78.6
77.5°	40.6	63.6	63.6	58.3	56.5
80°	28.3	48.6	42.4	37.1	34.4
82.5°	18.5	27.4	22.1	17.7	15.0
85°	9.7	10.6	6.2	5.3	4.4
87.5°	3.5	1.8	0.9	1.8	0.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)