

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: P312011

Luminaire Tested: **14FCZ2-20-UNV-L83050-RDP-CP250-W2A-U-3500K**

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: P312011
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-3500K
Description: 1'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT , 0.250" POLYCARB SHEET
Light Source: (168) 3500K 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: 1196.0 lumens
Efficiency: N/A
Efficacy: 72.5 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

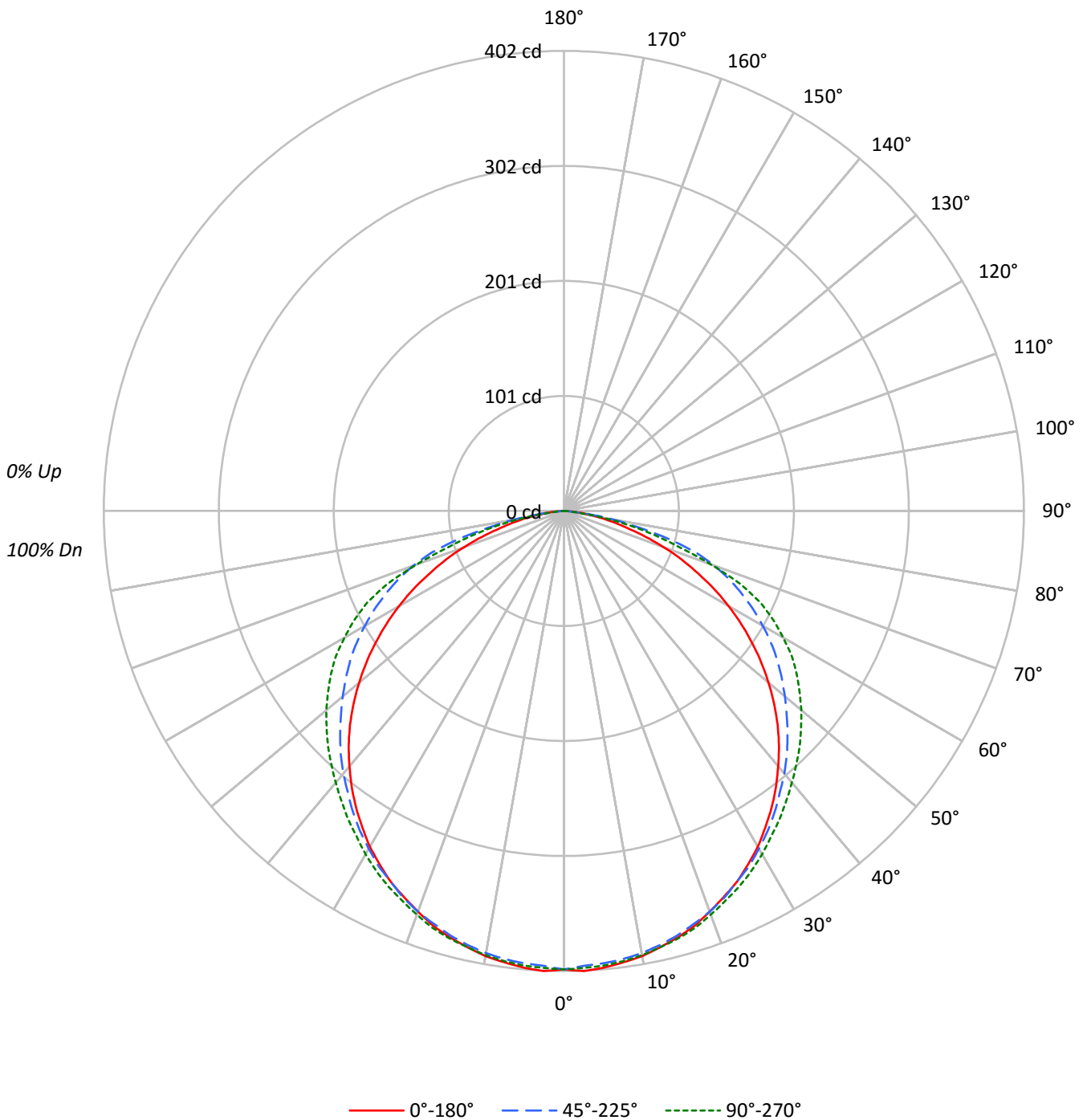
Input Watts (W): 16.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1078	1078	1078
5°	1082	1072	1077
10°	1079	1072	1077
15°	1074	1069	1077
20°	1067	1067	1075
25°	1062	1062	1076
30°	1053	1059	1076
35°	1040	1055	1080
40°	1023	1053	1089
45°	1005	1052	1109
50°	977	1055	1134
55°	942	1069	1165
60°	894	1081	1191
65°	826	1094	1207
70°	735	1102	1080
75°	593	990	864
80°	463	694	564
85°	318	201	145



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.9	3.2
10°-20°	108.8	9.1
20°-30°	165.6	13.8
30°-40°	201.7	16.9
40°-50°	214.0	17.9
50°-60°	202.0	16.9
60°-70°	163.1	13.6
70°-80°	88.5	7.4
80°-90°	14.3	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°	312.3	26.1
0°-40°	514.1	43.0
0°-60°	930.1	77.8
0°-90°	1196.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1196.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	401	401	401	401	401	
5°	401	400	397	400	399	38
15°	386	385	384	387	387	109
25°	358	357	358	361	362	165
35°	316	318	321	328	329	198
45°	264	268	276	287	291	203
55°	201	209	228	243	248	179
65°	130	146	172	186	190	129
75°	57	83	95	86	83	62
85°	10	11	6	6	5	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	400.6	400.6	400.6	400.6	400.6
2.5°	402.4	400.6	397.8	400.6	399.6
5°	400.6	399.6	396.8	399.6	398.7
7.5°	397.8	397.8	395.0	396.8	396.8
10°	395.0	394.0	392.2	395.0	394.0
12.5°	390.3	389.4	388.4	391.2	390.3
15°	385.6	384.7	383.8	386.6	386.6
17.5°	380.0	379.1	378.2	381.9	381.9
20°	372.6	372.6	372.6	376.3	375.4
22.5°	365.1	365.1	366.0	369.8	368.8
25°	357.6	356.7	357.6	361.4	362.3
27.5°	348.3	349.2	350.1	353.9	354.8
30°	338.9	339.9	340.8	345.5	346.4
32.5°	327.7	329.6	331.5	337.1	337.1
35°	316.5	318.4	321.2	327.7	328.7
37.5°	304.4	306.3	310.0	317.5	319.3
40°	291.3	294.1	299.7	307.2	310.0
42.5°	278.3	282.0	288.5	296.9	300.7
45°	264.2	268.0	276.4	286.7	291.3
47.5°	249.3	254.0	264.2	277.3	281.1
50°	233.4	240.0	252.1	266.1	270.8
52.5°	217.6	225.0	240.0	254.9	259.6
55°	200.8	209.2	227.8	242.8	248.4
57.5°	183.9	193.3	214.8	230.6	236.2
60°	166.2	177.4	200.8	216.6	221.3
62.5°	148.5	161.5	186.7	202.6	206.4
65°	129.8	145.7	171.8	185.8	189.5
67.5°	112.0	130.7	156.9	167.1	167.1
70°	93.4	113.9	140.1	142.9	137.3
72.5°	74.7	98.0	121.4	111.1	106.4
75°	57.0	83.1	95.2	85.9	83.1
77.5°	43.0	67.2	67.2	61.6	59.8
80°	29.9	51.4	44.8	39.2	36.4
82.5°	19.6	28.9	23.3	18.7	15.9
85°	10.3	11.2	6.5	5.6	4.7
87.5°	3.7	1.9	0.9	1.9	0.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)