

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: P312014

Luminaire Tested: **14FCZ2-20-UNV-L83050-RDP-CP250-W2A-U-5000K**

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: P312014
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-5000K
Description: 1'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT , 0.250" POLYCARB SHEET
Light Source: (168) 5000K 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: 1268.0 lumens
Efficiency: N/A
Efficacy: 73.3 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

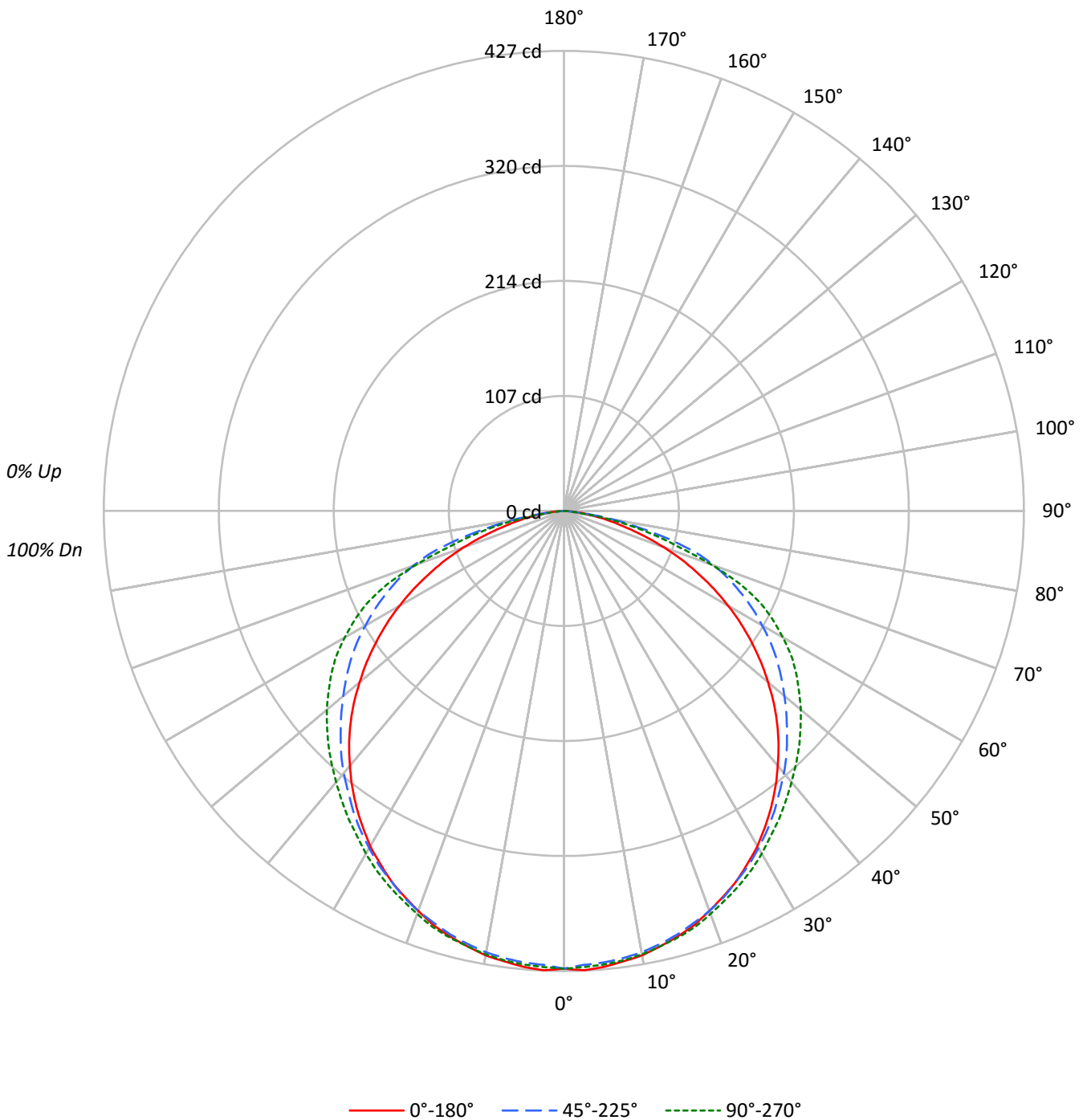
Input Watts (W): 17.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1143	1143	1143
5°	1147	1136	1142
10°	1144	1136	1142
15°	1139	1134	1142
20°	1131	1131	1140
25°	1126	1126	1140
30°	1116	1123	1141
35°	1102	1119	1145
40°	1085	1116	1155
45°	1066	1115	1176
50°	1036	1119	1202
55°	998	1133	1235
60°	948	1145	1263
65°	876	1160	1280
70°	779	1168	1145
75°	628	1050	916
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°	115.3	9.1
20°-30°	175.6	13.8
30°-40°	213.9	16.9
40°-50°	226.9	17.9
50°-60°	214.2	16.9
60°-70°	172.9	13.6
70°-80°	93.8	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°	331.1	26.1
0°-40°	545.0	43.0
0°-60°	986.1	77.8
0°-90°	1268.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1268.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	425	425	425	425	425	
5°	425	424	421	424	423	40
15°	409	408	407	410	410	115
25°	379	378	379	383	384	175
35°	336	338	340	348	348	210
45°	280	284	293	304	309	216
55°	213	222	242	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°	424.7	424.7	424.7	424.7	424.7
2.5°	426.7	424.7	421.7	424.7	423.7
5°	424.7	423.7	420.7	423.7	422.7
7.5°	421.7	421.7	418.7	420.7	420.7
10°	418.7	417.8	415.8	418.7	417.8
12.5°	413.8	412.8	411.8	414.8	413.8
15°	408.8	407.9	406.9	409.8	409.8
17.5°	402.9	401.9	400.9	404.9	404.9
20°	395.0	395.0	395.0	398.9	398.0
22.5°	387.1	387.1	388.1	392.0	391.0
25°	379.1	378.2	379.1	383.1	384.1
27.5°	369.2	370.2	371.2	375.2	376.2
30°	359.3	360.3	361.3	366.3	367.3
32.5°	347.5	349.4	351.4	357.4	357.4
35°	335.6	337.6	340.5	347.5	348.5
37.5°	322.7	324.7	328.7	336.6	338.6
40°	308.9	311.8	317.8	325.7	328.7
42.5°	295.0	299.0	305.9	314.8	318.8
45°	280.2	284.1	293.0	303.9	308.9
47.5°	264.3	269.3	280.2	294.0	298.0
50°	247.5	254.4	267.3	282.1	287.1
52.5°	230.7	238.6	254.4	270.3	275.2
55°	212.8	221.7	241.5	257.4	263.3
57.5°	195.0	204.9	227.7	244.5	250.5
60°	176.2	188.1	212.8	229.7	234.6
62.5°	157.4	171.3	198.0	214.8	218.8
65°	137.6	154.4	182.1	197.0	201.0
67.5°	118.8	138.6	166.3	177.2	177.2
70°	99.0	120.8	148.5	151.5	145.5
72.5°	79.2	103.9	128.7	117.8	112.9
75°	60.4	88.1	101.0	91.1	88.1
77.5°	45.5	71.3	71.3	65.3	63.4
80°	31.7	54.4	47.5	41.6	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)