

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: P311991

Luminaire Tested: **14FCZ2-20-UNV-L83050-RDP-CA08-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: P311991
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-CA08-W2A-U-3500K
Description: 1'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT , 0.08" ACRYLIC 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: 1289.0 lumens
Efficiency: N/A
Efficacy: 78.1 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

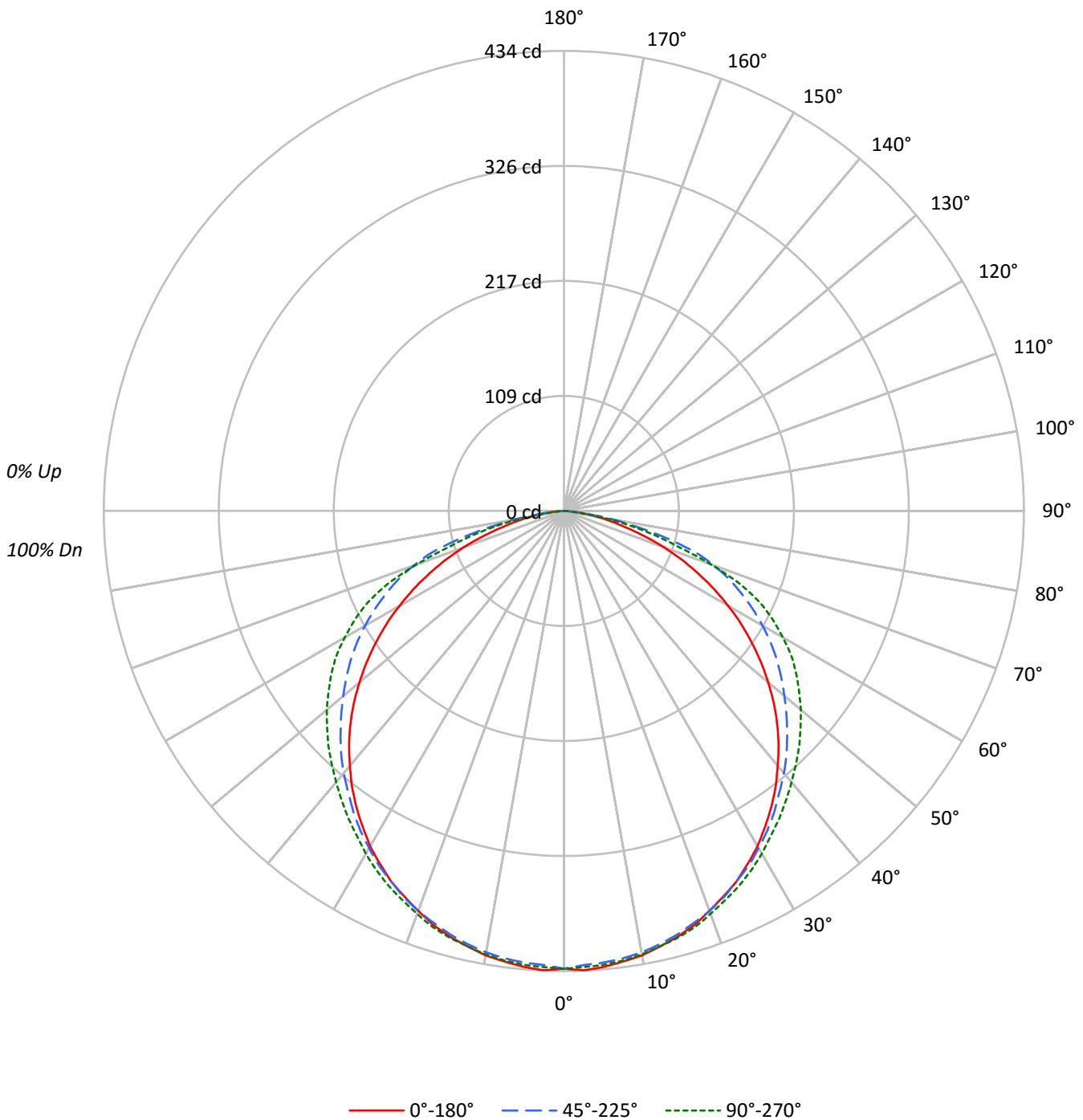
Input Watts (W): 16.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1162	1162	1162
5°	1166	1155	1161
10°	1163	1155	1160
15°	1158	1152	1161
20°	1150	1150	1158
25°	1144	1144	1159
30°	1135	1141	1160
35°	1121	1137	1164
40°	1103	1135	1174
45°	1084	1134	1195
50°	1053	1137	1222
55°	1015	1152	1256
60°	964	1165	1284
65°	891	1179	1301
70°	792	1188	1164
75°	638	1067	932
80°	499	748	607
85°	343	216	154



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.9	3.2
10°-20°	117.2	9.1
20°-30°	178.5	13.8
30°-40°	217.4	16.9
40°-50°	230.7	17.9
50°-60°	217.7	16.9
60°-70°	175.8	13.6
70°-80°	95.4	7.4
80°-90°	15.4	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°	336.6	26.1
0°-40°	554.0	43.0
0°-60°	1002.4	77.8
0°-90°	1289.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1289.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	432	432	432	432	432	
5°	432	431	428	431	430	41
15°	416	415	414	417	417	117
25°	385	384	385	390	390	177
35°	341	343	346	353	354	213
45°	285	289	298	309	314	219
55°	216	225	246	262	268	193
65°	140	157	185	200	204	139
75°	61	90	103	93	90	67
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°	431.7	431.7	431.7	431.7	431.7
2.5°	433.7	431.7	428.7	431.7	430.7
5°	431.7	430.7	427.7	430.7	429.7
7.5°	428.7	428.7	425.7	427.7	427.7
10°	425.7	424.7	422.7	425.7	424.7
12.5°	420.6	419.6	418.6	421.7	420.6
15°	415.6	414.6	413.6	416.6	416.6
17.5°	409.6	408.6	407.6	411.6	411.6
20°	401.5	401.5	401.5	405.6	404.5
22.5°	393.5	393.5	394.5	398.5	397.5
25°	385.4	384.4	385.4	389.5	390.5
27.5°	375.4	376.4	377.4	381.4	382.4
30°	365.3	366.3	367.3	372.3	373.4
32.5°	353.2	355.2	357.3	363.3	363.3
35°	341.1	343.2	346.2	353.2	354.2
37.5°	328.1	330.1	334.1	342.2	344.2
40°	314.0	317.0	323.0	331.1	334.1
42.5°	299.9	303.9	311.0	320.0	324.0
45°	284.8	288.8	297.9	308.9	314.0
47.5°	268.7	273.7	284.8	298.9	302.9
50°	251.6	258.6	271.7	286.8	291.8
52.5°	234.5	242.5	258.6	274.7	279.8
55°	216.4	225.4	245.5	261.6	267.7
57.5°	198.2	208.3	231.5	248.6	254.6
60°	179.1	191.2	216.4	233.5	238.5
62.5°	160.0	174.1	201.3	218.4	222.4
65°	139.9	157.0	185.2	200.3	204.3
67.5°	120.8	140.9	169.1	180.1	180.1
70°	100.6	122.8	151.0	154.0	147.9
72.5°	80.5	105.7	130.8	119.8	114.7
75°	61.4	89.6	102.6	92.6	89.6
77.5°	46.3	72.5	72.5	66.4	64.4
80°	32.2	55.3	48.3	42.3	39.2
82.5°	21.1	31.2	25.2	20.1	17.1
85°	11.1	12.1	7.0	6.0	5.0
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)