

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: P311863

Luminaire Tested: **14FCZ2-20-UNV-L83050-HRP-CP250-W2A-U-4500K**

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: P311863
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-18)
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-HRP-CP250-W2A-U-4500K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 4500K 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: 1499.0 lumens
Efficiency: N/A
Efficacy: 86.6 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.29 / 1.39
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

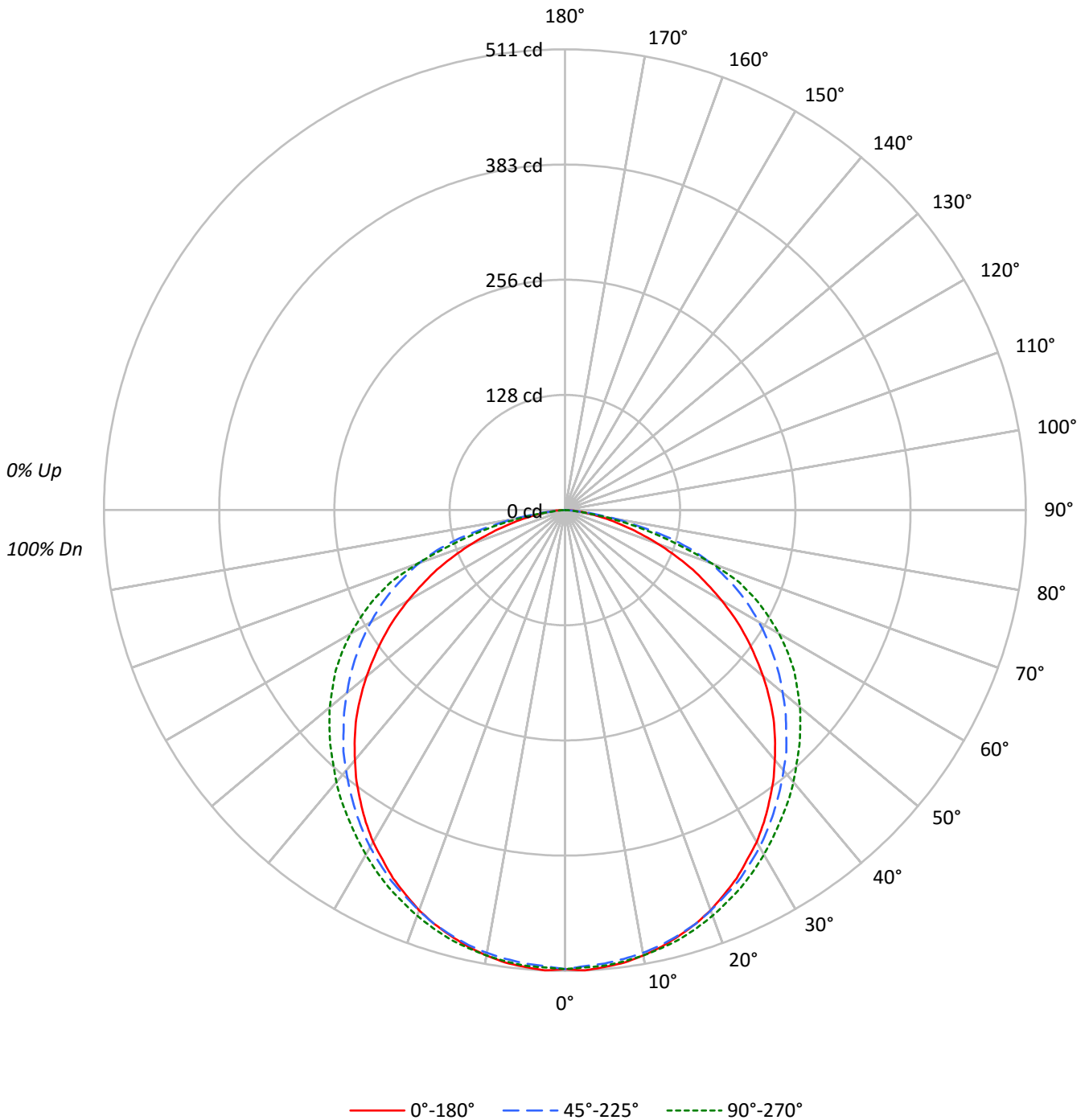
Input Watts (W): 17.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1370	1370	1370
5°	1374	1364	1370
10°	1370	1363	1370
15°	1362	1359	1372
20°	1353	1354	1371
25°	1338	1349	1371
30°	1321	1342	1371
35°	1298	1332	1373
40°	1272	1325	1384
45°	1245	1320	1399
50°	1202	1320	1425
55°	1150	1327	1455
60°	1081	1337	1474
65°	996	1351	1483
70°	868	1353	1365
75°	715	1259	1103
80°	563	905	738
85°	435	349	176



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.2	3.2
10°-20°	138.3	9.2
20°-30°	210.0	14.0
30°-40°	254.5	17.0
40°-50°	268.1	17.9
50°-60°	250.3	16.7
60°-70°	200.1	13.3
70°-80°	110.1	7.3
80°-90°	19.4	1.3
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°	396.5	26.5
0°-40°	651.0	43.4
0°-60°	1169.4	78.0
0°-90°	1499.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1499.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	509	509	509	509	509	
5°	509	507	505	508	507	48
15°	489	489	488	493	493	138
25°	451	452	454	461	462	207
35°	395	399	405	416	418	247
45°	327	333	347	362	368	252
55°	245	257	283	303	310	219
65°	156	176	212	230	233	154
75°	69	98	121	109	106	74
85°	14	18	11	7	6	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	509.1	509.1	509.1	509.1	509.1
2.5°	511.0	509.5	506.2	509.1	507.7
5°	508.6	507.2	504.8	508.1	507.2
7.5°	506.2	504.4	502.0	505.8	504.8
10°	501.5	500.1	498.7	502.0	501.5
12.5°	495.9	495.4	494.0	497.8	497.3
15°	488.8	488.8	487.9	492.6	492.6
17.5°	481.3	480.8	481.3	486.4	486.0
20°	472.3	472.3	472.8	478.9	478.9
22.5°	461.5	461.9	463.3	470.9	470.4
25°	450.6	451.6	454.4	461.0	461.9
27.5°	437.4	439.8	443.1	451.1	452.0
30°	425.2	426.6	431.8	439.3	441.2
32.5°	410.6	413.4	419.0	427.5	429.9
35°	395.0	398.8	405.4	415.7	418.1
37.5°	379.4	382.7	391.7	402.5	406.8
40°	362.0	367.7	377.1	389.3	394.1
42.5°	345.0	350.7	363.4	376.1	380.4
45°	327.1	333.3	346.9	362.5	367.7
47.5°	307.3	314.4	331.8	348.3	354.0
50°	287.1	296.0	315.3	333.7	340.3
52.5°	265.8	277.2	299.3	318.6	324.8
55°	245.1	257.4	282.8	302.6	310.2
57.5°	223.9	237.1	265.8	288.5	292.7
60°	200.8	216.8	248.4	268.2	273.9
62.5°	178.2	196.6	230.5	249.3	254.1
65°	156.5	176.3	212.1	229.6	232.9
67.5°	132.9	156.5	191.8	207.9	208.8
70°	110.3	137.6	172.0	179.6	173.5
72.5°	88.1	117.4	148.9	142.8	137.6
75°	68.8	98.5	121.1	108.9	106.1
77.5°	50.9	80.6	86.7	80.1	74.9
80°	36.3	63.6	58.4	50.0	47.6
82.5°	25.0	40.1	32.1	25.0	21.7
85°	14.1	17.9	11.3	7.1	5.7
87.5°	6.1	4.2	2.4	1.9	1.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)