

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: P311858

Luminaire Tested: **14FCZ2-20-UNV-L83050-HRP-CP187-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: P311858
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-CP187-W2A-U-4500K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
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: 1511.0 lumens
Efficiency: N/A
Efficacy: 87.3 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

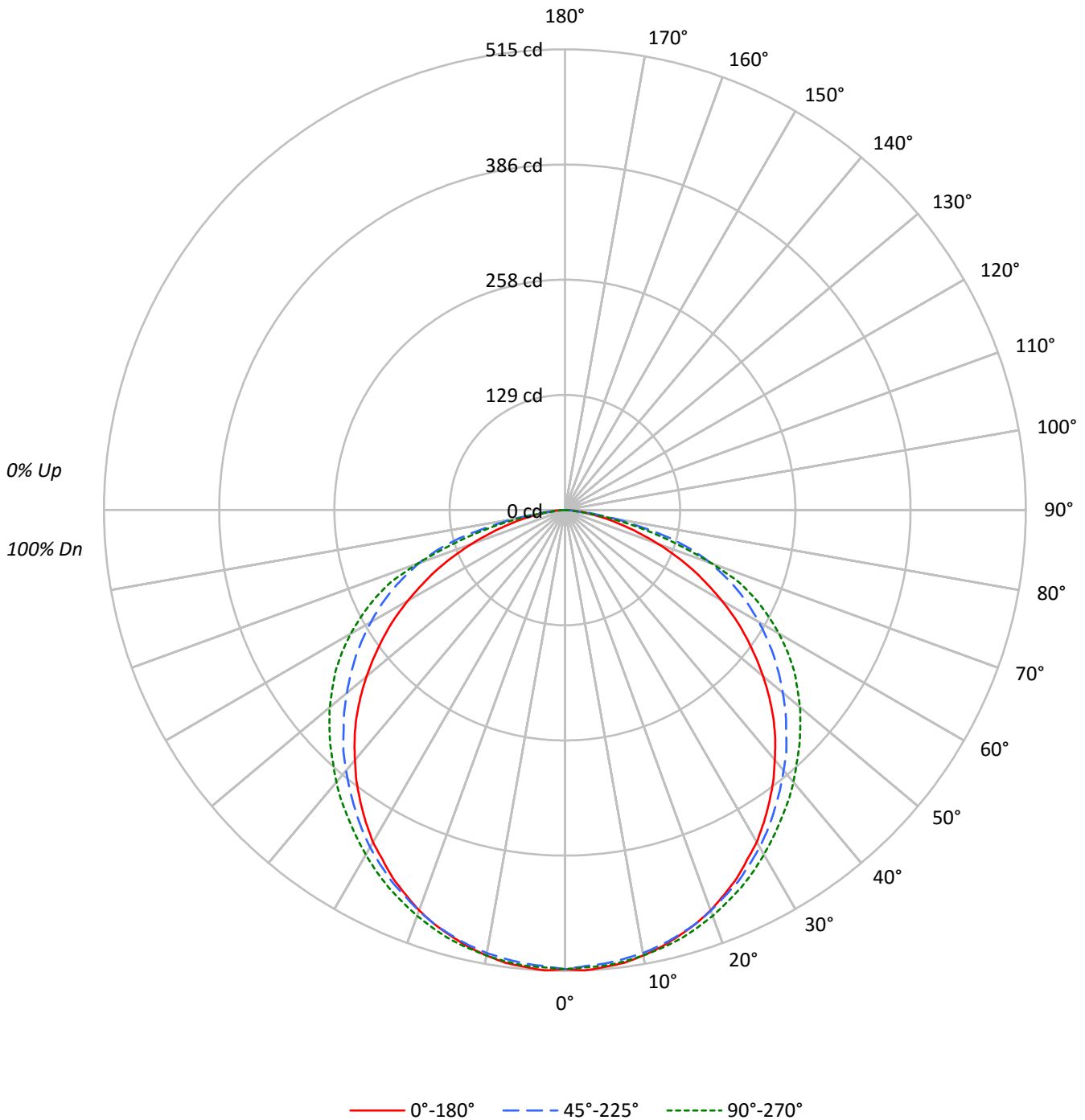
Input Watts (W): 17.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 14FC22-20-UNV-L83050-HRP-CP187-W2A-U-4500K

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°	1381	1381	1381
5°	1385	1375	1381
10°	1381	1374	1381
15°	1373	1370	1383
20°	1363	1365	1382
25°	1349	1360	1382
30°	1332	1352	1382
35°	1308	1342	1384
40°	1282	1335	1395
45°	1255	1331	1410
50°	1212	1331	1436
55°	1159	1338	1467
60°	1089	1348	1486
65°	1004	1361	1494
70°	875	1364	1375
75°	722	1269	1111
80°	567	913	744
85°	442	352	176



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.6	3.2
10°-20°	139.4	9.2
20°-30°	211.7	14.0
30°-40°	256.5	17.0
40°-50°	270.3	17.9
50°-60°	252.3	16.7
60°-70°	201.6	13.3
70°-80°	110.9	7.3
80°-90°	19.6	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°	399.7	26.5
0°-40°	656.2	43.4
0°-60°	1178.8	78.0
0°-90°	1511.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1511.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	513	513	513	513	513	
5°	513	511	509	512	511	49
15°	493	493	492	496	496	139
25°	454	455	458	465	466	209
35°	398	402	409	419	421	249
45°	330	336	350	365	371	254
55°	247	259	285	305	313	221
65°	158	178	214	231	235	155
75°	69	99	122	110	107	75
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°	513.1	513.1	513.1	513.1	513.1
2.5°	515.0	513.6	510.3	513.1	511.7
5°	512.7	511.2	508.9	512.2	511.2
7.5°	510.3	508.4	506.0	509.8	508.9
10°	505.5	504.1	502.7	506.0	505.5
12.5°	499.8	499.4	497.9	501.7	501.3
15°	492.7	492.7	491.8	496.5	496.5
17.5°	485.1	484.6	485.1	490.3	489.9
20°	476.1	476.1	476.6	482.7	482.7
22.5°	465.2	465.6	467.1	474.7	474.2
25°	454.2	455.2	458.0	464.7	465.6
27.5°	440.9	443.3	446.6	454.7	455.7
30°	428.6	430.0	435.2	442.8	444.7
32.5°	413.8	416.7	422.4	430.9	433.3
35°	398.2	402.0	408.6	419.1	421.4
37.5°	382.5	385.8	394.8	405.8	410.0
40°	364.9	370.6	380.1	392.5	397.2
42.5°	347.8	353.5	366.3	379.2	383.4
45°	329.7	335.9	349.7	365.4	370.6
47.5°	309.8	316.9	334.5	351.1	356.8
50°	289.4	298.4	317.9	336.4	343.0
52.5°	268.0	279.4	301.7	321.2	327.4
55°	247.1	259.4	285.1	305.0	312.6
57.5°	225.7	239.0	268.0	290.8	295.1
60°	202.4	218.6	250.4	270.4	276.1
62.5°	179.6	198.1	232.3	251.3	256.1
65°	157.7	177.7	213.8	231.4	234.7
67.5°	134.0	157.7	193.4	209.5	210.5
70°	111.2	138.7	173.4	181.0	174.8
72.5°	88.8	118.3	150.1	144.0	138.7
75°	69.4	99.3	122.1	109.8	106.9
77.5°	51.3	81.2	87.4	80.8	75.5
80°	36.6	64.1	58.9	50.4	48.0
82.5°	25.2	40.4	32.3	25.2	21.9
85°	14.3	18.1	11.4	7.1	5.7
87.5°	6.2	4.3	2.4	1.9	1.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)