

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: P311880

Luminaire Tested: **14FCZ2-25-UNV-L83050-HRP-CP187-W2A-U-3000K**

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: P311880
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: 14FCZ2-25-UNV-L83050-HRP-CP187-W2A-U-3000K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (168) 3000K 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: 1572.0 lumens
Efficiency: N/A
Efficacy: 80.2 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

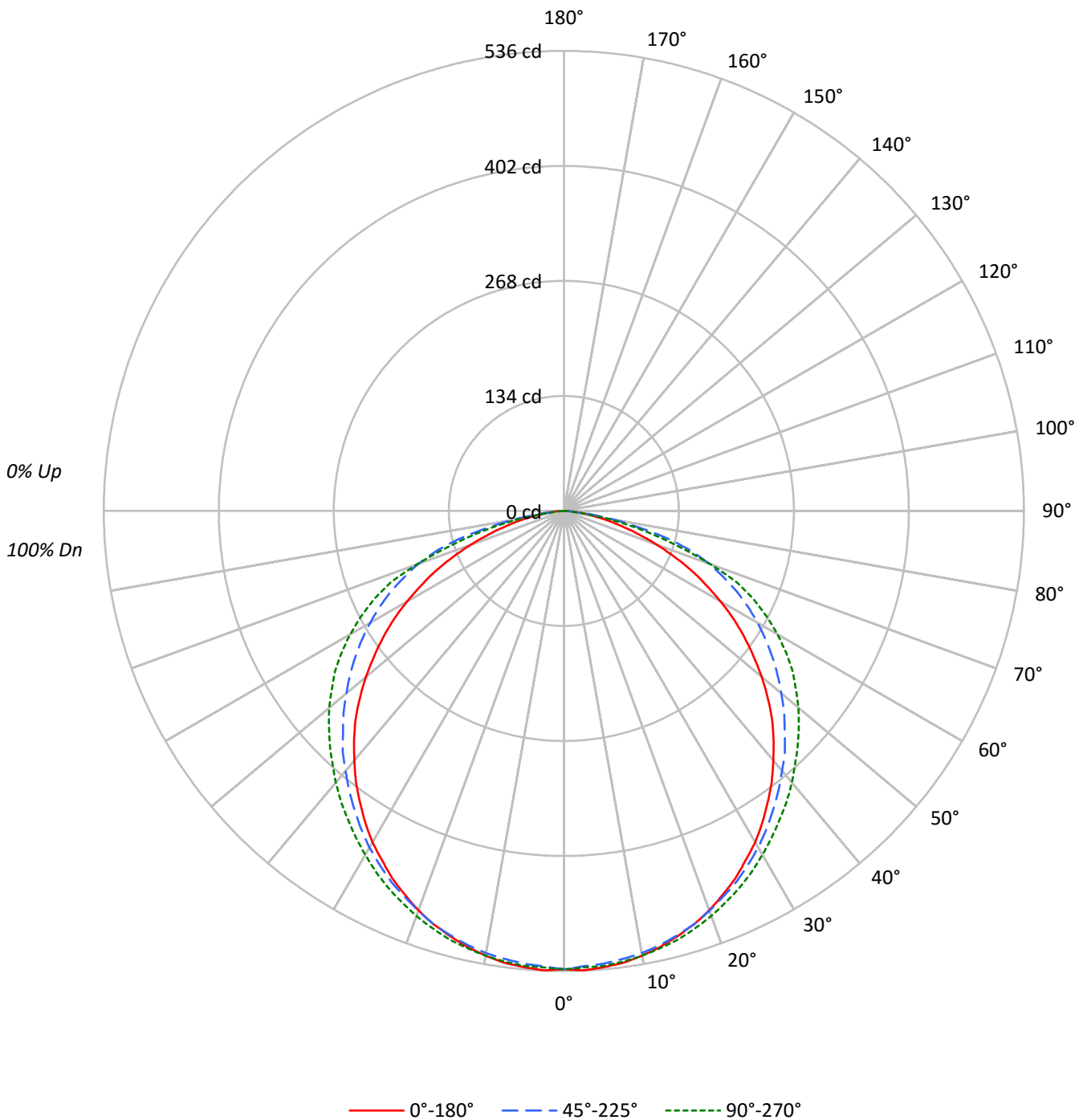
Input Watts (W): 19.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1437	1437	1437
5°	1441	1430	1437
10°	1437	1429	1437
15°	1428	1425	1439
20°	1418	1420	1438
25°	1403	1415	1438
30°	1386	1407	1438
35°	1361	1396	1441
40°	1333	1389	1451
45°	1306	1384	1467
50°	1260	1384	1494
55°	1206	1392	1526
60°	1133	1402	1546
65°	1045	1416	1555
70°	910	1419	1431
75°	751	1320	1156
80°	590	950	773
85°	457	367	182



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.5	3.2
10°-20°	145.0	9.2
20°-30°	220.2	14.0
30°-40°	266.9	17.0
40°-50°	281.2	17.9
50°-60°	262.5	16.7
60°-70°	209.8	13.3
70°-80°	115.4	7.3
80°-90°	20.4	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°	415.8	26.5
0°-40°	682.7	43.4
0°-60°	1226.4	78.0
0°-90°	1572.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1572.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	534	534	534	534	534	
5°	533	532	529	533	532	51
15°	513	513	512	517	517	145
25°	473	474	476	483	484	218
35°	414	418	425	436	438	259
45°	343	350	364	380	386	264
55°	257	270	297	317	325	229
65°	164	185	222	241	244	162
75°	72	103	127	114	111	78
85°	15	19	12	7	6	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	533.9	533.9	533.9	533.9	533.9
2.5°	535.8	534.4	530.9	533.9	532.4
5°	533.4	531.9	529.4	532.9	531.9
7.5°	530.9	528.9	526.4	530.4	529.4
10°	526.0	524.5	523.0	526.4	526.0
12.5°	520.0	519.5	518.0	522.0	521.5
15°	512.6	512.6	511.6	516.6	516.6
17.5°	504.7	504.2	504.7	510.1	509.6
20°	495.3	495.3	495.8	502.2	502.2
22.5°	483.9	484.4	485.9	493.8	493.3
25°	472.6	473.6	476.5	483.4	484.4
27.5°	458.7	461.2	464.7	473.1	474.0
30°	445.9	447.4	452.8	460.7	462.7
32.5°	430.5	433.5	439.4	448.3	450.8
35°	414.2	418.2	425.1	436.0	438.5
37.5°	397.9	401.4	410.8	422.1	426.6
40°	379.6	385.6	395.5	408.3	413.2
42.5°	361.8	367.8	381.1	394.5	398.9
45°	343.1	349.5	363.8	380.1	385.6
47.5°	322.3	329.7	348.0	365.3	371.2
50°	301.0	310.4	330.7	350.0	356.9
52.5°	278.8	290.7	313.9	334.2	340.6
55°	257.0	269.9	296.6	317.3	325.3
57.5°	234.8	248.6	278.8	302.5	307.0
60°	210.6	227.4	260.5	281.3	287.2
62.5°	186.9	206.1	241.7	261.5	266.4
65°	164.1	184.9	222.4	240.7	244.2
67.5°	139.4	164.1	201.2	218.0	219.0
70°	115.7	144.3	180.4	188.3	181.9
72.5°	92.4	123.1	156.2	149.8	144.3
75°	72.2	103.3	127.0	114.2	111.2
77.5°	53.4	84.5	91.0	84.0	78.6
80°	38.1	66.7	61.3	52.4	49.9
82.5°	26.2	42.0	33.6	26.2	22.7
85°	14.8	18.8	11.9	7.4	5.9
87.5°	6.4	4.4	2.5	2.0	2.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)