

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: P311882

Luminaire Tested: **14FCZ2-25-UNV-L83050-HRP-CP187-W2A-U-4000K**

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: P311882
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-4000K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (168) 4000K 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: 1747.0 lumens
Efficiency: N/A
Efficacy: 86.9 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

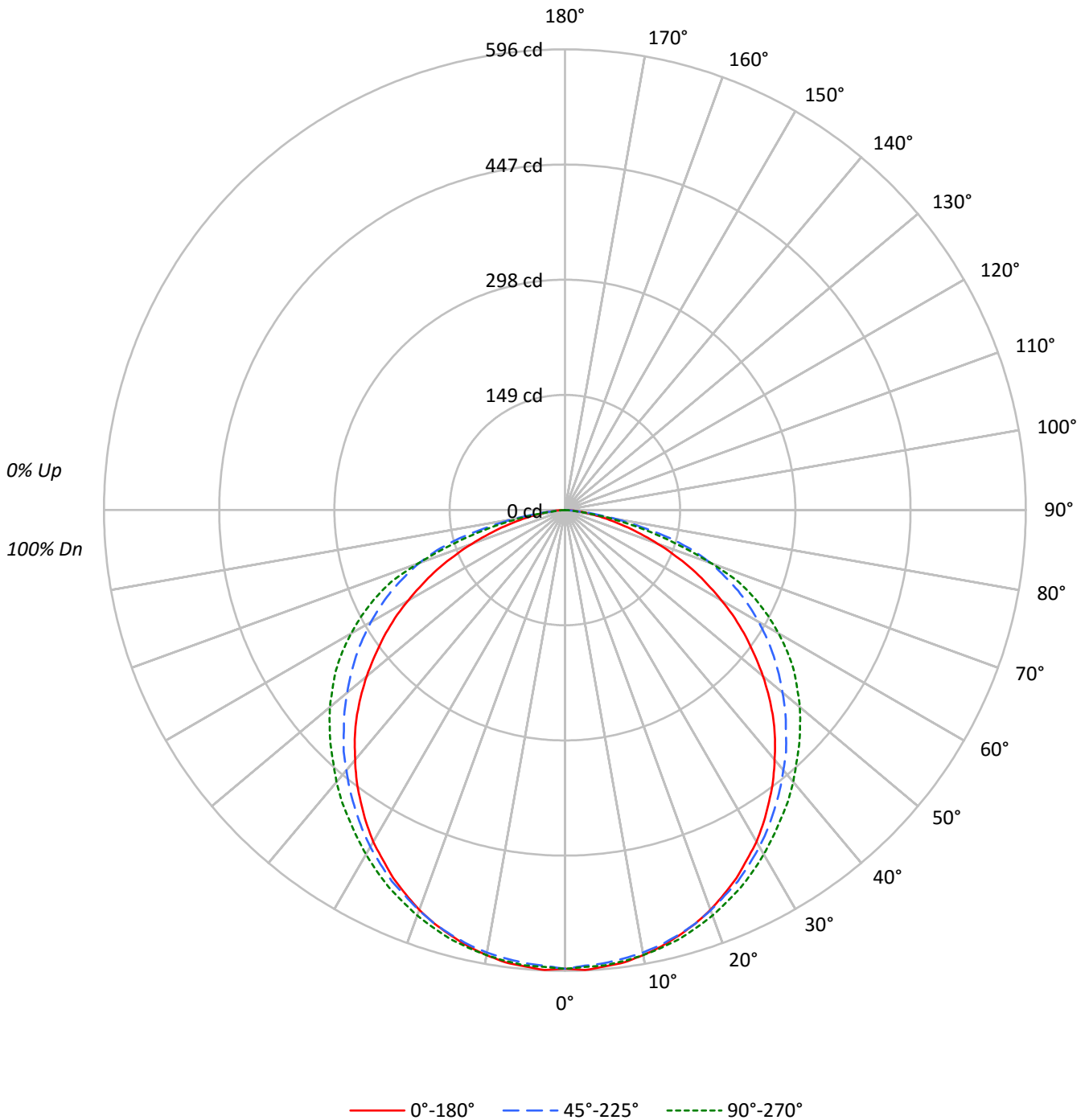
Input Watts (W): 20.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1597	1597	1597
5°	1601	1589	1597
10°	1597	1588	1597
15°	1587	1584	1599
20°	1576	1578	1598
25°	1559	1572	1599
30°	1540	1564	1598
35°	1512	1552	1601
40°	1482	1544	1613
45°	1451	1539	1631
50°	1400	1539	1660
55°	1340	1546	1696
60°	1259	1558	1718
65°	1161	1574	1728
70°	1011	1578	1591
75°	834	1468	1285
80°	656	1055	860
85°	509	408	204



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.2	3.2
10°-20°	161.2	9.2
20°-30°	244.8	14.0
30°-40°	296.6	17.0
40°-50°	312.5	17.9
50°-60°	291.7	16.7
60°-70°	233.2	13.3
70°-80°	128.3	7.3
80°-90°	22.6	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°	462.1	26.5
0°-40°	758.7	43.4
0°-60°	1362.9	78.0
0°-90°	1747.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1747.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	593	593	593	593	593	
5°	593	591	588	592	591	56
15°	570	570	569	574	574	161
25°	525	526	530	537	538	242
35°	460	465	472	484	487	288
45°	381	388	404	422	428	293
55°	286	300	330	353	362	255
65°	182	206	247	268	271	180
75°	80	115	141	127	124	86
85°	16	21	13	8	7	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	593.3	593.3	593.3	593.3	593.3
2.5°	595.5	593.8	590.0	593.3	591.6
5°	592.7	591.1	588.3	592.2	591.1
7.5°	590.0	587.8	585.0	589.4	588.3
10°	584.5	582.9	581.2	585.0	584.5
12.5°	577.9	577.4	575.7	580.1	579.6
15°	569.7	569.7	568.6	574.1	574.1
17.5°	560.9	560.3	560.9	566.9	566.4
20°	550.4	550.4	551.0	558.1	558.1
22.5°	537.8	538.4	540.0	548.8	548.2
25°	525.2	526.3	529.6	537.3	538.4
27.5°	509.8	512.5	516.4	525.7	526.8
30°	495.5	497.2	503.2	512.0	514.2
32.5°	478.5	481.8	488.4	498.3	501.0
35°	460.3	464.7	472.4	484.5	487.3
37.5°	442.2	446.1	456.5	469.1	474.1
40°	421.9	428.5	439.5	453.8	459.3
42.5°	402.1	408.7	423.5	438.4	443.3
45°	381.2	388.4	404.3	422.4	428.5
47.5°	358.2	366.4	386.7	406.0	412.6
50°	334.5	345.0	367.5	388.9	396.6
52.5°	309.8	323.0	348.8	371.4	378.5
55°	285.7	299.9	329.6	352.7	361.5
57.5°	260.9	276.3	309.8	336.2	341.1
60°	234.0	252.7	289.5	312.6	319.2
62.5°	207.7	229.1	268.6	290.6	296.1
65°	182.4	205.5	247.2	267.5	271.4
67.5°	154.9	182.4	223.6	242.3	243.4
70°	128.5	160.4	200.5	209.3	202.2
72.5°	102.7	136.8	173.6	166.5	160.4
75°	80.2	114.8	141.2	126.9	123.6
77.5°	59.3	93.9	101.1	93.4	87.3
80°	42.3	74.2	68.1	58.2	55.5
82.5°	29.1	46.7	37.4	29.1	25.3
85°	16.5	20.9	13.2	8.2	6.6
87.5°	7.1	4.9	2.7	2.2	2.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)