

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: P311883

Luminaire Tested: **14FCZ2-25-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: P311883
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-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: 1764.0 lumens
Efficiency: N/A
Efficacy: 85.6 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

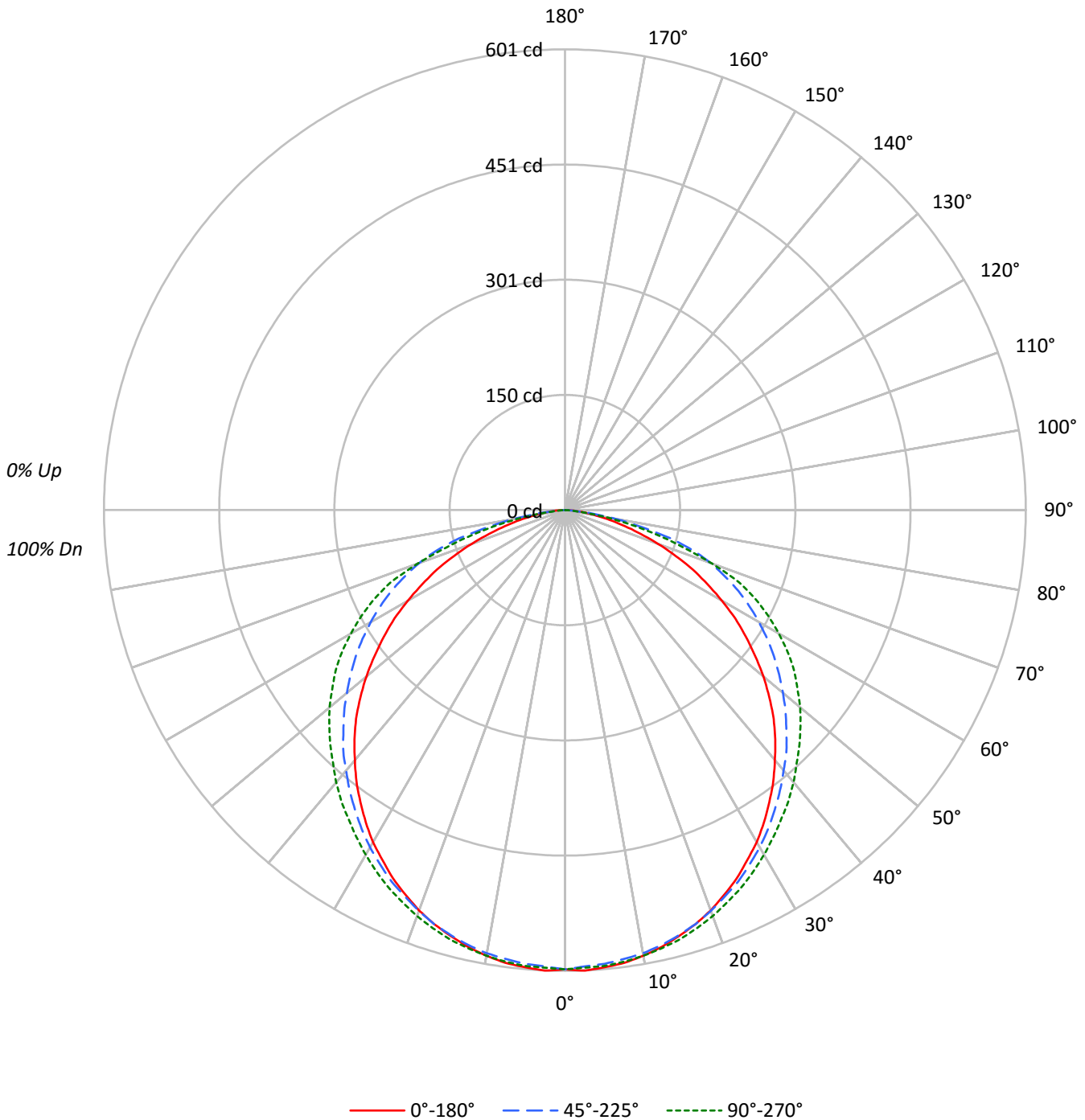
Input Watts (W): 20.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1612	1612	1612
5°	1617	1605	1612
10°	1613	1604	1613
15°	1602	1599	1615
20°	1592	1593	1614
25°	1575	1588	1614
30°	1555	1579	1613
35°	1527	1567	1616
40°	1496	1559	1629
45°	1465	1554	1647
50°	1414	1554	1677
55°	1353	1561	1712
60°	1272	1573	1735
65°	1173	1589	1745
70°	1021	1593	1606
75°	842	1483	1298
80°	662	1066	868
85°	513	411	207



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.7	3.2
10°-20°	162.7	9.2
20°-30°	247.1	14.0
30°-40°	299.4	17.0
40°-50°	315.6	17.9
50°-60°	294.6	16.7
60°-70°	235.4	13.3
70°-80°	129.5	7.3
80°-90°	22.9	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°	466.6	26.5
0°-40°	766.0	43.4
0°-60°	1376.2	78.0
0°-90°	1764.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1764.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	599	599	599	599	599	
5°	598	597	594	598	597	57
15°	575	575	574	580	580	162
25°	530	531	535	542	544	244
35°	465	469	477	489	492	291
45°	385	392	408	427	433	296
55°	288	303	333	356	365	257
65°	184	208	250	270	274	181
75°	81	116	143	128	125	87
85°	17	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°	599.1	599.1	599.1	599.1	599.1
2.5°	601.3	599.6	595.7	599.1	597.4
5°	598.5	596.8	594.1	598.0	596.8
7.5°	595.7	593.5	590.7	595.2	594.1
10°	590.2	588.5	586.9	590.7	590.2
12.5°	583.5	583.0	581.3	585.8	585.2
15°	575.2	575.2	574.1	579.6	579.6
17.5°	566.3	565.8	566.3	572.4	571.9
20°	555.8	555.8	556.4	563.6	563.6
22.5°	543.0	543.6	545.3	554.1	553.6
25°	530.3	531.4	534.7	542.5	543.6
27.5°	514.8	517.5	521.4	530.8	531.9
30°	500.3	502.0	508.1	517.0	519.2
32.5°	483.1	486.5	493.1	503.1	505.9
35°	464.8	469.3	477.0	489.2	492.0
37.5°	446.5	450.4	460.9	473.7	478.7
40°	426.0	432.7	443.8	458.2	463.7
42.5°	406.0	412.7	427.7	442.6	447.6
45°	385.0	392.2	408.3	426.6	432.7
47.5°	361.7	370.0	390.5	409.9	416.6
50°	337.8	348.3	371.1	392.7	400.5
52.5°	312.8	326.2	352.2	375.0	382.2
55°	288.4	302.9	332.8	356.1	365.0
57.5°	263.5	279.0	312.8	339.5	344.5
60°	236.3	255.2	292.3	315.6	322.3
62.5°	209.7	231.3	271.2	293.4	299.0
65°	184.2	207.5	249.6	270.1	274.0
67.5°	156.4	184.2	225.8	244.6	245.7
70°	129.8	162.0	202.5	211.3	204.1
72.5°	103.7	138.1	175.3	168.1	162.0
75°	81.0	115.9	142.6	128.1	124.8
77.5°	59.9	94.9	102.1	94.3	88.2
80°	42.7	74.9	68.8	58.8	56.0
82.5°	29.4	47.1	37.7	29.4	25.5
85°	16.6	21.1	13.3	8.3	6.7
87.5°	7.2	5.0	2.8	2.2	2.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)