

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: P308121

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-HRP-CA125-W2A-U-5700K**

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: P308121
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-24HE-UNV-L82765-HRP-CA125-W2A-U-5700K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC 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: 1772.0 lumens
Efficiency: N/A
Efficacy: 91.3 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

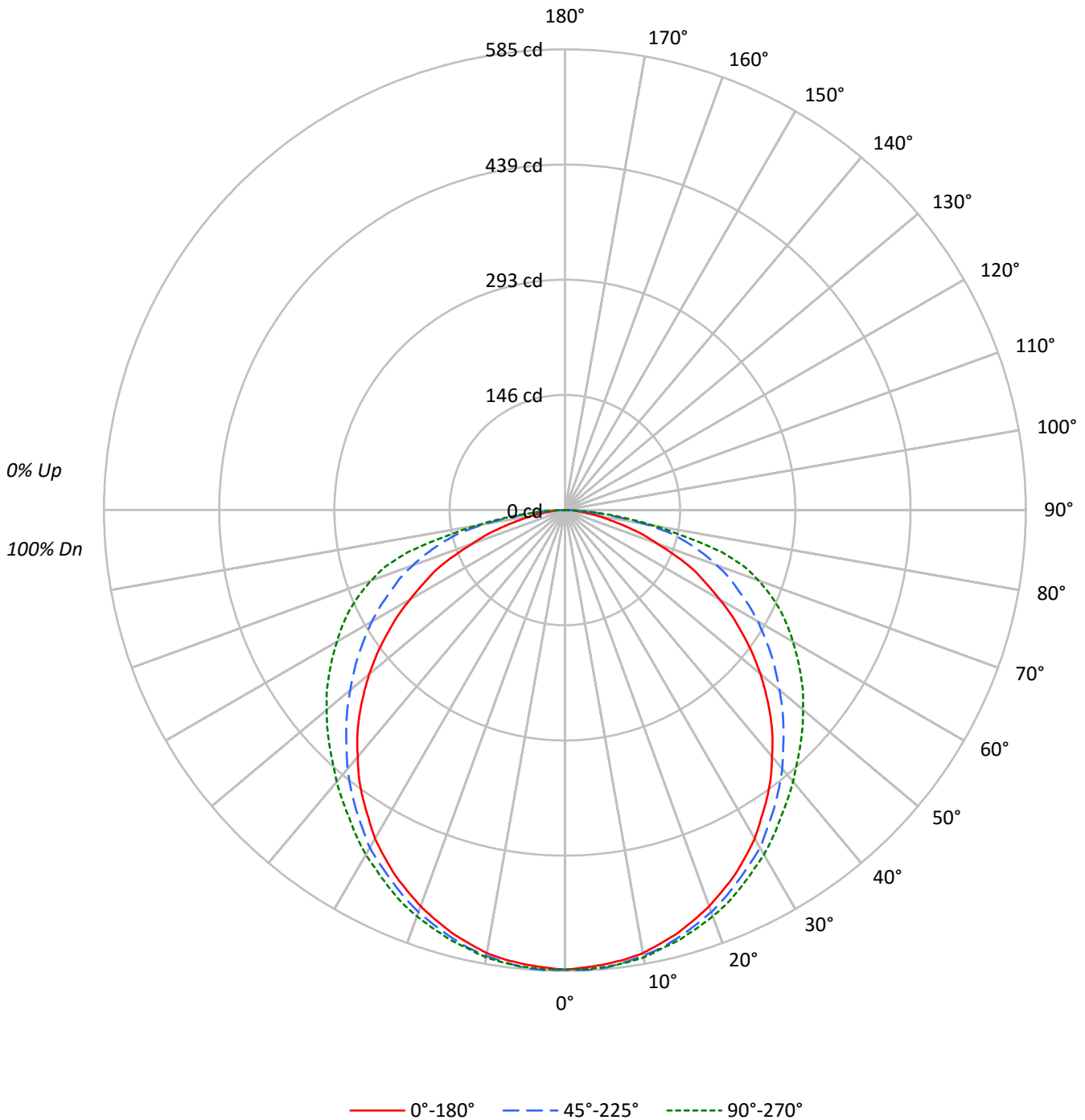
Input Watts (W): 19.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1570	1570	1570
5°	1564	1576	1573
10°	1561	1570	1576
15°	1548	1563	1573
20°	1533	1556	1572
25°	1517	1543	1570
30°	1497	1539	1570
35°	1469	1520	1568
40°	1437	1508	1583
45°	1404	1493	1608
50°	1357	1488	1652
55°	1295	1500	1715
60°	1221	1522	1799
65°	1153	1552	1922
70°	985	1618	2058
75°	826	1685	2139
80°	676	1629	1784
85°	587	1207	1312



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.3	3.1
10°-20°	158.2	8.9
20°-30°	239.7	13.5
30°-40°	289.5	16.3
40°-50°	304.2	17.2
50°-60°	286.2	16.2
60°-70°	238.6	13.5
70°-80°	158.1	8.9
80°-90°	42.1	2.4
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°	453.2	25.6
0°-40°	742.7	41.9
0°-60°	1333.1	75.2
0°-90°	1772.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1772.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	584	584	584	584	584	
5°	579	580	584	584	582	55
15°	556	558	561	563	564	157
25°	511	514	520	526	529	235
35°	447	452	463	473	477	280
45°	369	374	392	412	422	284
55°	276	288	320	352	366	247
65°	181	197	244	284	302	176
75°	79	111	162	196	206	86
85°	19	29	39	42	42	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	583.5	583.5	583.5	583.5	583.5
2.5°	581.3	582.4	584.6	584.6	583.5
5°	579.0	580.1	583.5	583.5	582.4
7.5°	575.7	576.8	579.0	581.3	580.1
10°	571.2	572.3	574.6	576.8	576.8
12.5°	563.4	564.5	569.0	570.1	570.1
15°	555.6	557.8	561.1	563.4	564.5
17.5°	545.5	547.7	552.2	556.7	556.7
20°	535.4	537.7	543.3	547.7	548.8
22.5°	523.1	526.5	532.1	537.7	539.9
25°	510.8	514.2	519.8	526.5	528.7
27.5°	496.3	499.7	507.5	515.3	516.4
30°	481.8	485.1	495.2	501.9	505.3
32.5°	463.9	468.4	478.4	488.5	491.8
35°	447.1	451.6	462.8	472.8	477.3
37.5°	429.2	433.7	446.0	458.3	463.9
40°	409.1	414.7	429.2	442.7	450.5
42.5°	390.1	395.7	410.2	428.1	435.9
45°	368.9	374.5	392.4	412.5	422.5
47.5°	346.5	353.2	374.5	399.1	409.1
50°	324.2	332.0	355.5	383.4	394.6
52.5°	300.7	310.8	337.6	367.8	381.2
55°	276.1	288.4	319.7	352.1	365.5
57.5°	252.6	263.8	300.7	335.3	349.9
60°	226.9	241.4	282.8	318.6	334.2
62.5°	202.3	218.0	263.8	301.8	318.6
65°	181.1	196.7	243.7	283.9	301.8
67.5°	153.1	174.4	226.9	264.9	282.8
70°	125.2	154.3	205.7	244.8	261.6
72.5°	104.0	131.9	184.4	223.6	239.2
75°	79.4	110.7	162.1	195.6	205.7
77.5°	59.2	91.7	138.6	155.4	156.5
80°	43.6	70.4	105.1	110.7	115.1
82.5°	30.2	49.2	68.2	74.9	77.1
85°	19.0	29.1	39.1	42.5	42.5
87.5°	10.1	11.2	13.4	13.4	13.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)