

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: P312473

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-HRP-CA125-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: P312473
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-L83050-HRP-CA125-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC 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: 1867.0 lumens
Efficiency: N/A
Efficacy: 94.3 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

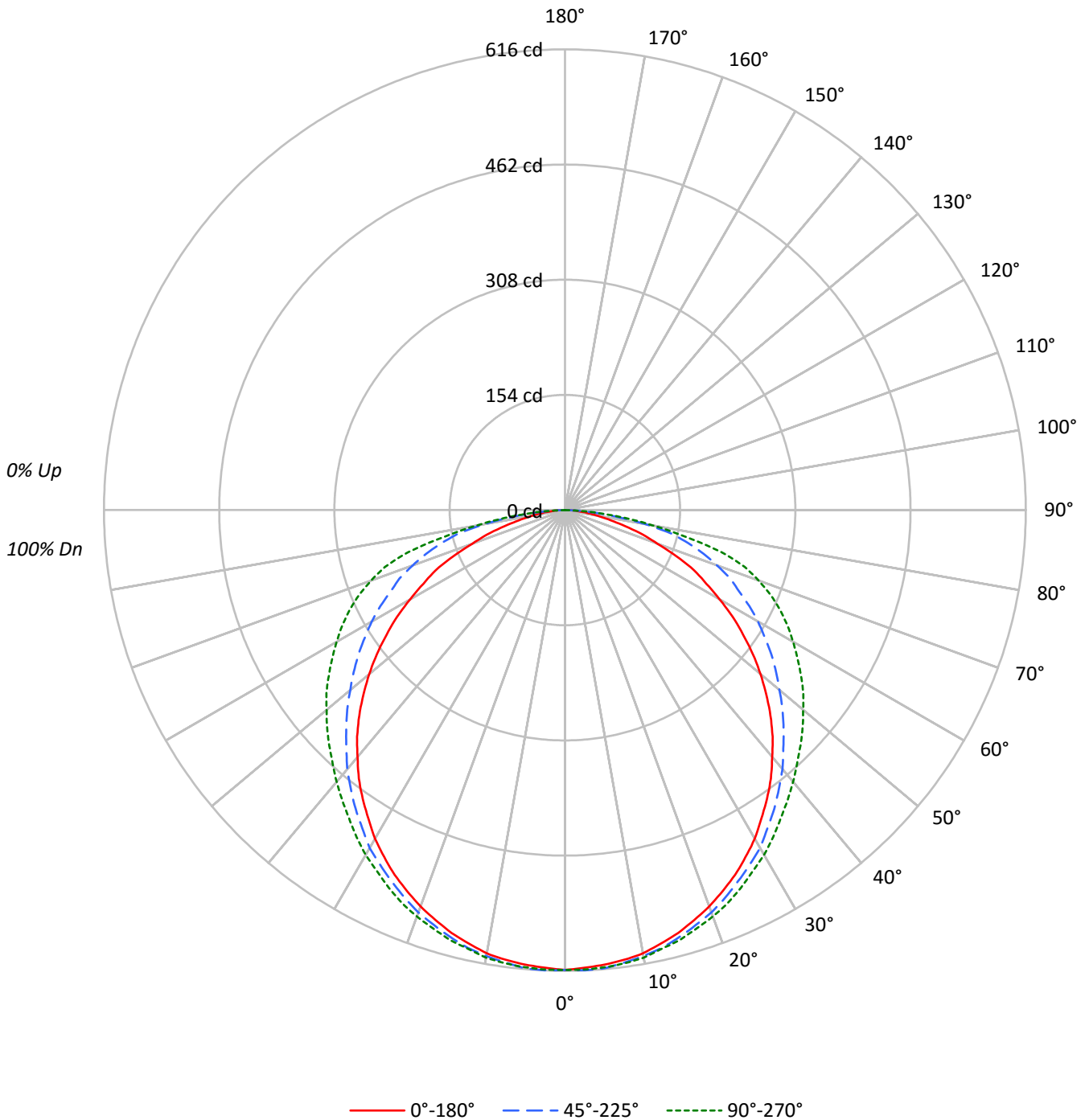
Input Watts (W): 19.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1654	1654	1654
5°	1648	1661	1657
10°	1644	1654	1661
15°	1631	1647	1657
20°	1615	1639	1656
25°	1598	1626	1654
30°	1577	1621	1654
35°	1548	1602	1652
40°	1514	1589	1667
45°	1479	1573	1694
50°	1430	1568	1740
55°	1365	1580	1807
60°	1287	1604	1895
65°	1215	1635	2025
70°	1038	1705	2168
75°	869	1776	2253
80°	711	1715	1880
85°	618	1272	1383



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.3	3.1
10°-20°	166.7	8.9
20°-30°	252.6	13.5
30°-40°	305.0	16.3
40°-50°	320.5	17.2
50°-60°	301.5	16.2
60°-70°	251.4	13.5
70°-80°	166.6	8.9
80°-90°	44.4	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°	477.5	25.6
0°-40°	782.5	41.9
0°-60°	1404.6	75.2
0°-90°	1867.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1867.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	615	615	615	615	615	
5°	610	611	615	615	614	58
15°	585	588	591	594	595	165
25°	538	542	548	555	557	248
35°	471	476	488	498	503	295
45°	389	394	413	435	445	299
55°	291	304	337	371	385	260
65°	191	207	257	299	318	186
75°	84	117	171	206	217	91
85°	20	31	41	45	45	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	614.8	614.8	614.8	614.8	614.8
2.5°	612.4	613.6	616.0	616.0	614.8
5°	610.1	611.2	614.8	614.8	613.6
7.5°	606.5	607.7	610.1	612.4	611.2
10°	601.8	603.0	605.4	607.7	607.7
12.5°	593.6	594.8	599.5	600.6	600.6
15°	585.3	587.7	591.2	593.6	594.8
17.5°	574.7	577.1	581.8	586.5	586.5
20°	564.1	566.5	572.4	577.1	578.3
22.5°	551.2	554.7	560.6	566.5	568.9
25°	538.2	541.8	547.7	554.7	557.1
27.5°	522.9	526.5	534.7	542.9	544.1
30°	507.6	511.1	521.7	528.8	532.3
32.5°	488.8	493.5	504.1	514.7	518.2
35°	471.1	475.8	487.6	498.2	502.9
37.5°	452.3	457.0	469.9	482.9	488.8
40°	431.1	436.9	452.3	466.4	474.6
42.5°	411.0	416.9	432.2	451.1	459.3
45°	388.7	394.5	413.4	434.6	445.2
47.5°	365.1	372.2	394.5	420.5	431.1
50°	341.5	349.8	374.5	404.0	415.7
52.5°	316.8	327.4	355.7	387.5	401.6
55°	290.9	303.9	336.8	371.0	385.1
57.5°	266.2	277.9	316.8	353.3	368.6
60°	239.1	254.4	298.0	335.7	352.1
62.5°	213.2	229.7	277.9	318.0	335.7
65°	190.8	207.3	256.7	299.1	318.0
67.5°	161.4	183.7	239.1	279.1	298.0
70°	131.9	162.5	216.7	257.9	275.6
72.5°	109.5	139.0	194.3	235.5	252.0
75°	83.6	116.6	170.8	206.1	216.7
77.5°	62.4	96.6	146.0	163.7	164.9
80°	45.9	74.2	110.7	116.6	121.3
82.5°	31.8	51.8	71.8	78.9	81.3
85°	20.0	30.6	41.2	44.8	44.8
87.5°	10.6	11.8	14.1	14.1	14.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)