

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: P312471

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-HRP-CA125-W2A-U-3500K**

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: P312471
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-3500K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 3500K 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: 1761.0 lumens
Efficiency: N/A
Efficacy: 93.2 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

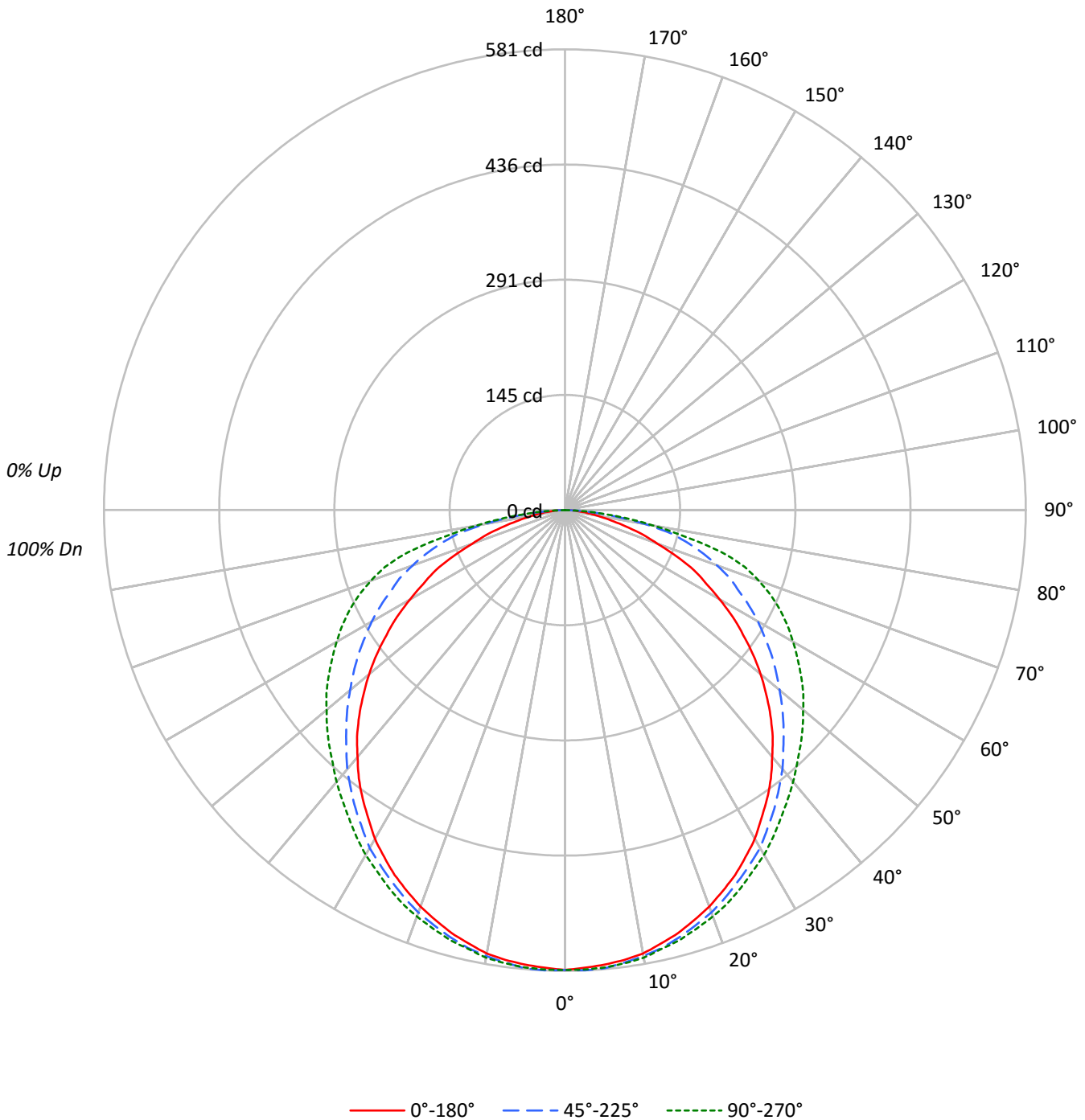
Input Watts (W): 18.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1560	1560	1560
5°	1554	1566	1563
10°	1551	1560	1566
15°	1538	1554	1563
20°	1524	1546	1562
25°	1507	1534	1560
30°	1488	1529	1560
35°	1460	1511	1558
40°	1428	1499	1573
45°	1395	1484	1598
50°	1349	1479	1641
55°	1287	1491	1704
60°	1214	1513	1788
65°	1146	1542	1910
70°	979	1608	2045
75°	820	1675	2125
80°	671	1618	1773
85°	584	1201	1303



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.0	3.1
10°-20°	157.2	8.9
20°-30°	238.2	13.5
30°-40°	287.7	16.3
40°-50°	302.3	17.2
50°-60°	284.4	16.2
60°-70°	237.2	13.5
70°-80°	157.1	8.9
80°-90°	41.9	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°	450.4	25.6
0°-40°	738.1	41.9
0°-60°	1324.8	75.2
0°-90°	1761.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1761.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	580	580	580	580	580	
5°	575	576	580	580	579	55
15°	552	554	558	560	561	156
25°	508	511	517	523	525	234
35°	444	449	460	470	474	278
45°	367	372	390	410	420	282
55°	274	287	318	350	363	245
65°	180	196	242	282	300	175
75°	79	110	161	194	204	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°	579.9	579.9	579.9	579.9	579.9
2.5°	577.7	578.8	581.0	581.0	579.9
5°	575.4	576.5	579.9	579.9	578.8
7.5°	572.1	573.2	575.4	577.7	576.5
10°	567.7	568.8	571.0	573.2	573.2
12.5°	559.9	561.0	565.4	566.5	566.5
15°	552.1	554.3	557.7	559.9	561.0
17.5°	542.1	544.3	548.8	553.2	553.2
20°	532.1	534.3	539.9	544.3	545.4
22.5°	519.9	523.2	528.8	534.3	536.6
25°	507.7	511.0	516.6	523.2	525.4
27.5°	493.2	496.6	504.3	512.1	513.2
30°	478.8	482.1	492.1	498.8	502.1
32.5°	461.0	465.5	475.5	485.5	488.8
35°	444.4	448.8	459.9	469.9	474.3
37.5°	426.6	431.0	443.2	455.5	461.0
40°	406.6	412.1	426.6	439.9	447.7
42.5°	387.7	393.3	407.7	425.5	433.2
45°	366.6	372.1	389.9	409.9	419.9
47.5°	344.4	351.0	372.1	396.6	406.6
50°	322.2	329.9	353.3	381.0	392.1
52.5°	298.8	308.8	335.5	365.5	378.8
55°	274.4	286.6	317.7	349.9	363.3
57.5°	251.1	262.2	298.8	333.3	347.7
60°	225.5	239.9	281.1	316.6	332.2
62.5°	201.1	216.6	262.2	299.9	316.6
65°	180.0	195.5	242.2	282.2	299.9
67.5°	152.2	173.3	225.5	263.3	281.1
70°	124.4	153.3	204.4	243.3	259.9
72.5°	103.3	131.1	183.3	222.2	237.7
75°	78.9	110.0	161.1	194.4	204.4
77.5°	58.9	91.1	137.7	154.4	155.5
80°	43.3	70.0	104.4	110.0	114.4
82.5°	30.0	48.9	67.8	74.4	76.7
85°	18.9	28.9	38.9	42.2	42.2
87.5°	10.0	11.1	13.3	13.3	13.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)