

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: P312466

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-HRP-CA08-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: P312466
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-CA08-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" 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: 1767.0 lumens
Efficiency: N/A
Efficacy: 93.5 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

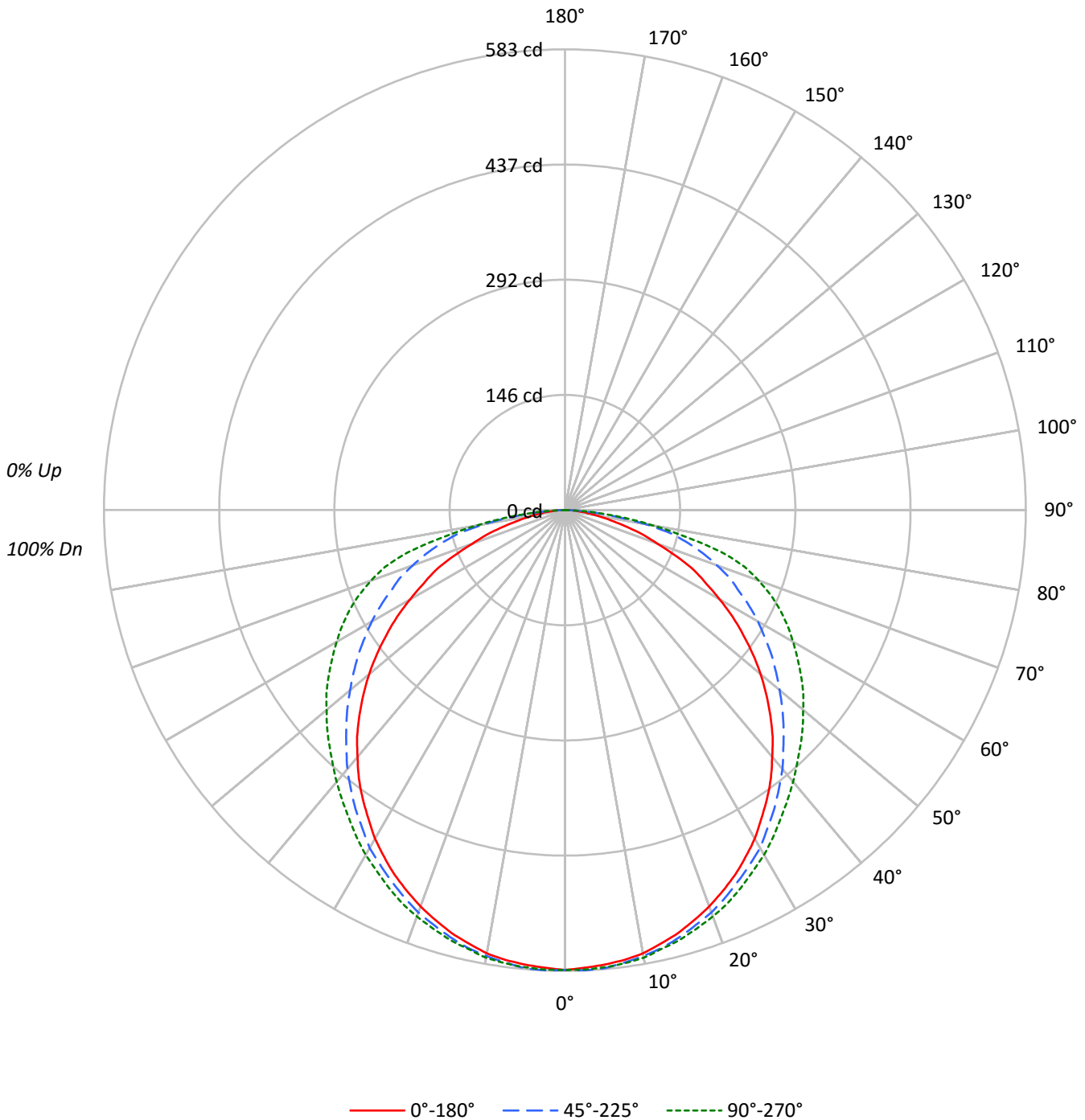
Input Watts (W): 18.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1566	1566	1566
5°	1560	1572	1569
10°	1556	1565	1572
15°	1543	1559	1568
20°	1529	1551	1567
25°	1512	1539	1565
30°	1493	1534	1565
35°	1465	1516	1564
40°	1433	1503	1578
45°	1400	1489	1603
50°	1353	1484	1647
55°	1292	1496	1710
60°	1218	1518	1794
65°	1150	1547	1917
70°	982	1614	2052
75°	822	1680	2132
80°	674	1624	1779
85°	584	1204	1309



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.1	3.1
10°-20°	157.7	8.9
20°-30°	239.1	13.5
30°-40°	288.7	16.3
40°-50°	303.3	17.2
50°-60°	285.4	16.2
60°-70°	238.0	13.5
70°-80°	157.7	8.9
80°-90°	42.0	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°	452.0	25.6
0°-40°	740.6	41.9
0°-60°	1329.3	75.2
0°-90°	1767.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1767.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	582	582	582	582	582	
5°	577	578	582	582	581	55
15°	554	556	560	562	563	156
25°	509	513	518	525	527	235
35°	446	450	462	472	476	279
45°	368	373	391	411	421	283
55°	275	288	319	351	364	246
65°	181	196	243	283	301	176
75°	79	110	162	195	205	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°	581.9	581.9	581.9	581.9	581.9
2.5°	579.6	580.7	583.0	583.0	581.9
5°	577.4	578.5	581.9	581.9	580.7
7.5°	574.1	575.2	577.4	579.6	578.5
10°	569.6	570.7	572.9	575.2	575.2
12.5°	561.8	562.9	567.4	568.5	568.5
15°	554.0	556.2	559.6	561.8	562.9
17.5°	544.0	546.2	550.6	555.1	555.1
20°	533.9	536.2	541.7	546.2	547.3
22.5°	521.7	525.0	530.6	536.2	538.4
25°	509.4	512.7	518.3	525.0	527.2
27.5°	494.9	498.3	506.1	513.9	515.0
30°	480.4	483.8	493.8	500.5	503.8
32.5°	462.6	467.0	477.1	487.1	490.5
35°	445.9	450.3	461.5	471.5	476.0
37.5°	428.0	432.5	444.7	457.0	462.6
40°	408.0	413.5	428.0	441.4	449.2
42.5°	389.0	394.6	409.1	426.9	434.7
45°	367.8	373.4	391.2	411.3	421.3
47.5°	345.5	352.2	373.4	397.9	408.0
50°	323.3	331.1	354.5	382.3	393.5
52.5°	299.8	309.9	336.6	366.7	380.1
55°	275.3	287.6	318.8	351.1	364.5
57.5°	251.9	263.1	299.8	334.4	348.9
60°	226.3	240.8	282.0	317.7	333.3
62.5°	201.8	217.4	263.1	301.0	317.7
65°	180.6	196.2	243.0	283.1	301.0
67.5°	152.7	173.9	226.3	264.2	282.0
70°	124.8	153.8	205.1	244.1	260.8
72.5°	103.7	131.5	183.9	222.9	238.5
75°	79.1	110.4	161.6	195.1	205.1
77.5°	59.1	91.4	138.2	154.9	156.1
80°	43.5	70.2	104.8	110.4	114.8
82.5°	30.1	49.0	68.0	74.7	76.9
85°	18.9	29.0	39.0	42.4	42.4
87.5°	10.0	11.1	13.4	13.4	13.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)