

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: P308108

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-HRP-CA08-W2A-U-4000K**

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: P308108
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-CA08-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" 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: 1702.0 lumens
Efficiency: N/A
Efficacy: 89.1 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

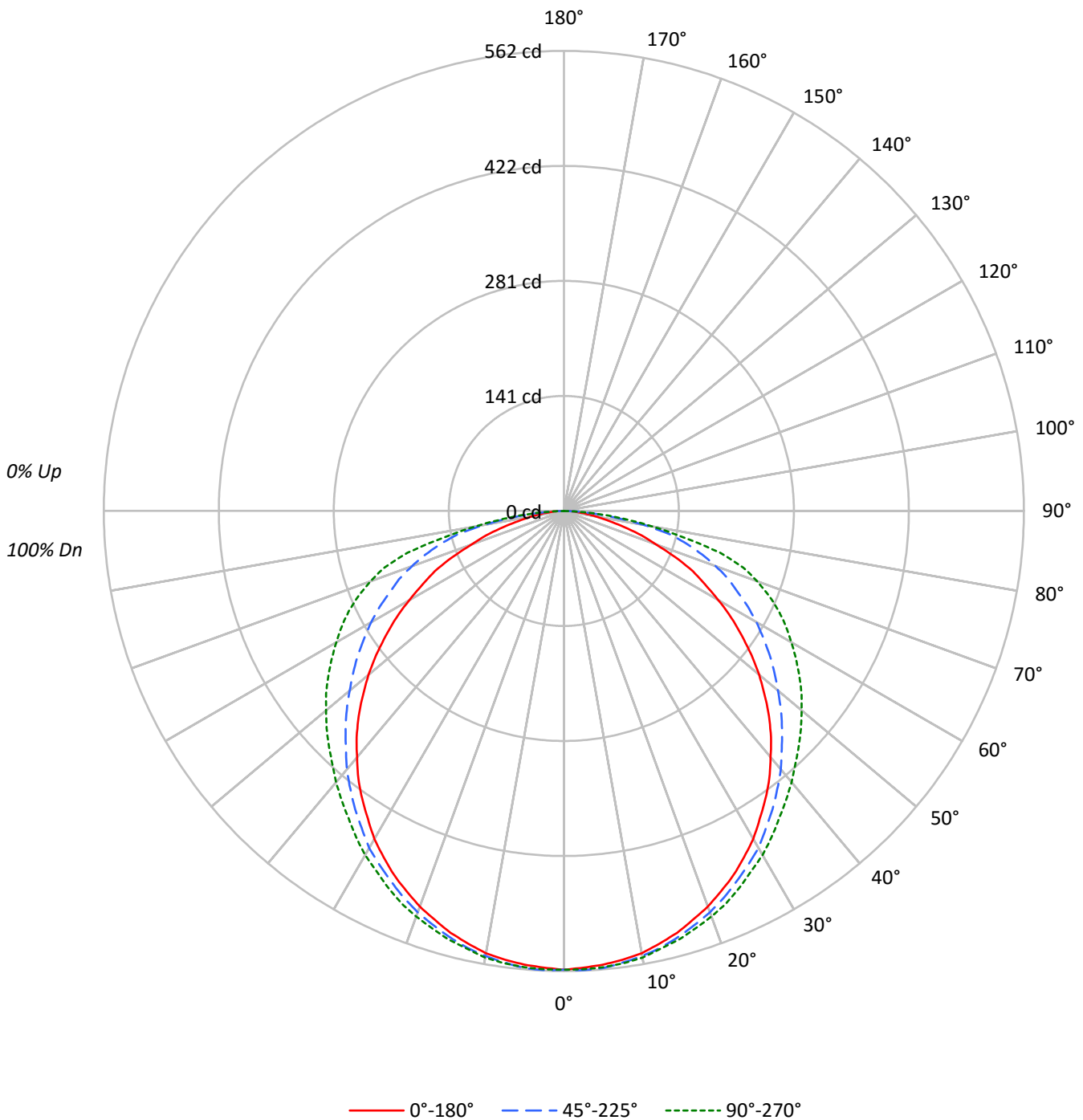
Input Watts (W): 19.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1508	1508	1508
5°	1502	1514	1511
10°	1499	1508	1514
15°	1487	1502	1511
20°	1473	1494	1510
25°	1457	1483	1508
30°	1438	1478	1508
35°	1411	1460	1506
40°	1381	1448	1520
45°	1348	1434	1544
50°	1304	1429	1587
55°	1244	1441	1647
60°	1173	1462	1728
65°	1107	1491	1846
70°	946	1555	1976
75°	792	1619	2054
80°	649	1564	1714
85°	565	1161	1260



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.1	3.1
10°-20°	151.9	8.9
20°-30°	230.3	13.5
30°-40°	278.1	16.3
40°-50°	292.2	17.2
50°-60°	274.9	16.2
60°-70°	229.2	13.5
70°-80°	151.9	8.9
80°-90°	40.5	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°	435.3	25.6
0°-40°	713.4	41.9
0°-60°	1280.5	75.2
0°-90°	1702.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1702.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	560	560	560	560	560	
5°	556	557	560	560	559	53
15°	534	536	539	541	542	150
25°	491	494	499	506	508	226
35°	430	434	444	454	458	269
45°	354	360	377	396	406	273
55°	265	277	307	338	351	237
65°	174	189	234	273	290	169
75°	76	106	156	188	198	83
85°	18	28	38	41	41	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	560.4	560.4	560.4	560.4	560.4
2.5°	558.3	559.4	561.5	561.5	560.4
5°	556.2	557.2	560.4	560.4	559.4
7.5°	552.9	554.0	556.2	558.3	557.2
10°	548.6	549.7	551.9	554.0	554.0
12.5°	541.1	542.2	546.5	547.6	547.6
15°	533.6	535.8	539.0	541.1	542.2
17.5°	523.9	526.1	530.4	534.7	534.7
20°	514.3	516.4	521.8	526.1	527.2
22.5°	502.5	505.7	511.1	516.4	518.6
25°	490.7	493.9	499.3	505.7	507.8
27.5°	476.7	479.9	487.4	495.0	496.0
30°	462.7	466.0	475.6	482.1	485.3
32.5°	445.6	449.9	459.5	469.2	472.4
35°	429.5	433.8	444.5	454.2	458.5
37.5°	412.3	416.6	428.4	440.2	445.6
40°	393.0	398.3	412.3	425.2	432.7
42.5°	374.7	380.1	394.0	411.2	418.7
45°	354.3	359.7	376.9	396.2	405.8
47.5°	332.8	339.3	359.7	383.3	393.0
50°	311.4	318.9	341.4	368.3	379.0
52.5°	288.8	298.5	324.2	353.2	366.1
55°	265.2	277.0	307.1	338.2	351.1
57.5°	242.6	253.4	288.8	322.1	336.1
60°	218.0	231.9	271.6	306.0	321.0
62.5°	194.3	209.4	253.4	289.9	306.0
65°	173.9	189.0	234.1	272.7	289.9
67.5°	147.1	167.5	218.0	254.5	271.6
70°	120.2	148.2	197.6	235.1	251.2
72.5°	99.9	126.7	177.2	214.7	229.8
75°	76.2	106.3	155.7	187.9	197.6
77.5°	56.9	88.0	133.1	149.2	150.3
80°	41.9	67.6	100.9	106.3	110.6
82.5°	29.0	47.2	65.5	71.9	74.1
85°	18.3	27.9	37.6	40.8	40.8
87.5°	9.7	10.7	12.9	12.9	12.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)