

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: P308646

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-CA08-W2A-U-3000K**

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: P308646
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
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-CA08-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, RIBBED 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: 2073.0 lumens
Efficiency: N/A
Efficacy: 110.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

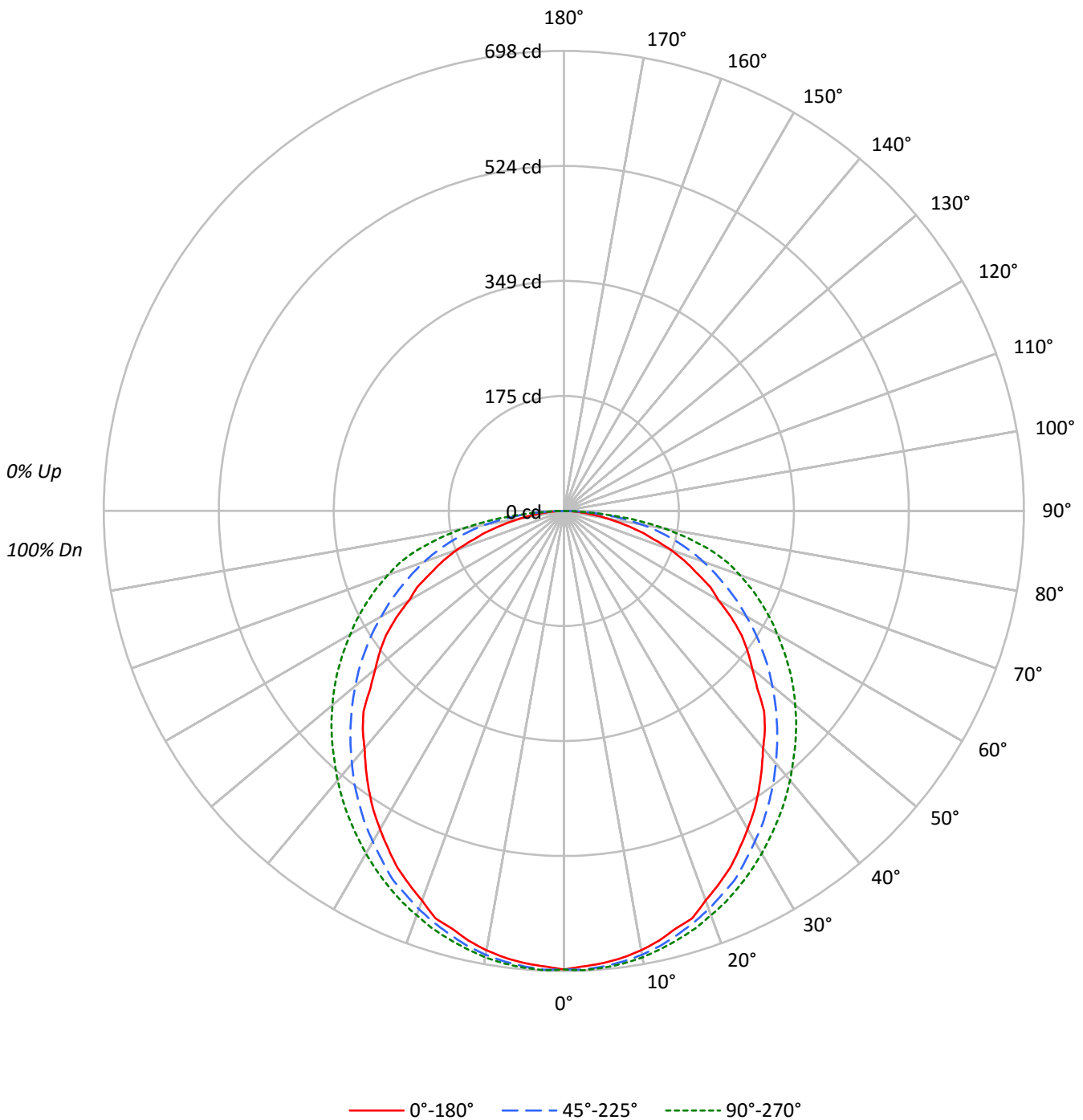
Input Watts (W): 18.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P308646

CATALOG NUMBER: 22FCZ2-24HE-UNV-L82765-CA08-W2A-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P308646

CATALOG NUMBER: 22FCZ2-24HE-UNV-L82765-CA08-W2A-U-3000K

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	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	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	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
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	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1872	1872	1872
5°	1860	1873	1879
10°	1849	1868	1879
15°	1827	1855	1874
20°	1801	1841	1869
25°	1773	1829	1868
30°	1733	1800	1865
35°	1695	1780	1868
40°	1652	1757	1875
45°	1635	1741	1892
50°	1562	1728	1919
55°	1545	1722	1960
60°	1458	1720	2013
65°	1415	1731	2104
70°	1358	1772	2233
75°	1238	1826	2404
80°	1062	1891	2430
85°	858	1806	2084



TEST NUMBER: P308646

CATALOG NUMBER: 22FCZ2-24HE-UNV-L82765-CA08-W2A-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.8	3.2
10°-20°	187.7	9.1
20°-30°	282.6	13.6
30°-40°	339.1	16.4
40°-50°	354.5	17.1
50°-60°	330.3	15.9
60°-70°	270.9	13.1
70°-80°	182.6	8.8
80°-90°	59.5	2.9
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°	536.1	25.9
0°-40°	875.3	42.2
0°-60°	1560.1	75.3
0°-90°	2073.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2073.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	696	696	696	696	696	
5°	689	690	694	694	696	65
15°	656	660	666	672	673	185
25°	597	601	616	625	629	275
35°	516	523	542	561	568	323
45°	430	433	457	485	497	328
55°	329	335	367	402	418	292
65°	222	232	272	312	330	221
75°	119	132	176	215	231	125
85°	28	40	58	68	68	33
90°	0	0	0	0	0	



TEST NUMBER: P308646

CATALOG NUMBER: 22FCZ2-24HE-UNV-L82765-CA08-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	695.5	695.5	695.5	695.5	695.5
2.5°	691.5	693.5	696.5	697.5	697.5
5°	688.6	690.5	693.5	694.5	695.5
7.5°	683.6	685.6	689.6	691.5	692.5
10°	676.7	678.6	683.6	686.6	687.6
12.5°	667.7	669.7	675.7	679.6	680.6
15°	655.8	659.8	665.7	671.7	672.7
17.5°	647.9	646.9	654.8	661.8	663.8
20°	629.0	634.0	642.9	650.9	652.8
22.5°	613.2	617.1	629.0	638.0	641.9
25°	597.3	601.3	616.1	625.1	629.0
27.5°	577.4	583.4	597.3	610.2	615.1
30°	557.6	563.6	579.4	594.3	600.3
32.5°	537.8	544.7	561.6	577.4	584.4
35°	515.9	522.9	541.7	560.6	568.5
37.5°	493.1	502.0	521.9	542.7	551.6
40°	470.3	479.2	500.1	523.9	533.8
42.5°	451.4	455.4	479.2	505.0	514.9
45°	429.6	432.6	457.4	485.2	497.1
47.5°	397.9	408.8	435.6	466.3	478.2
50°	373.1	385.0	412.7	445.5	458.4
52.5°	352.2	360.2	390.9	423.7	438.5
55°	329.4	335.4	367.1	401.8	417.7
57.5°	301.6	312.5	344.3	380.0	395.9
60°	270.9	284.8	319.5	358.2	374.0
62.5°	251.0	259.0	296.7	335.4	353.2
65°	222.2	232.2	271.9	311.5	330.4
67.5°	198.4	208.4	249.0	288.7	307.6
70°	172.6	182.6	225.2	264.9	283.8
72.5°	142.9	156.8	201.4	241.1	260.9
75°	119.1	132.0	175.6	215.3	231.2
77.5°	92.3	109.1	149.8	182.6	194.5
80°	68.5	85.3	122.0	145.8	156.8
82.5°	46.6	63.5	91.3	109.1	115.1
85°	27.8	39.7	58.5	68.5	67.5
87.5°	12.9	16.9	23.8	23.8	22.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)