

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: P308951

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-S-CP250-W2A-U-2700K**

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: P308951
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
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-S-CP250-W2A-U-2700K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB 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: 1971.0 lumens
Efficiency: N/A
Efficacy: 104.3 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

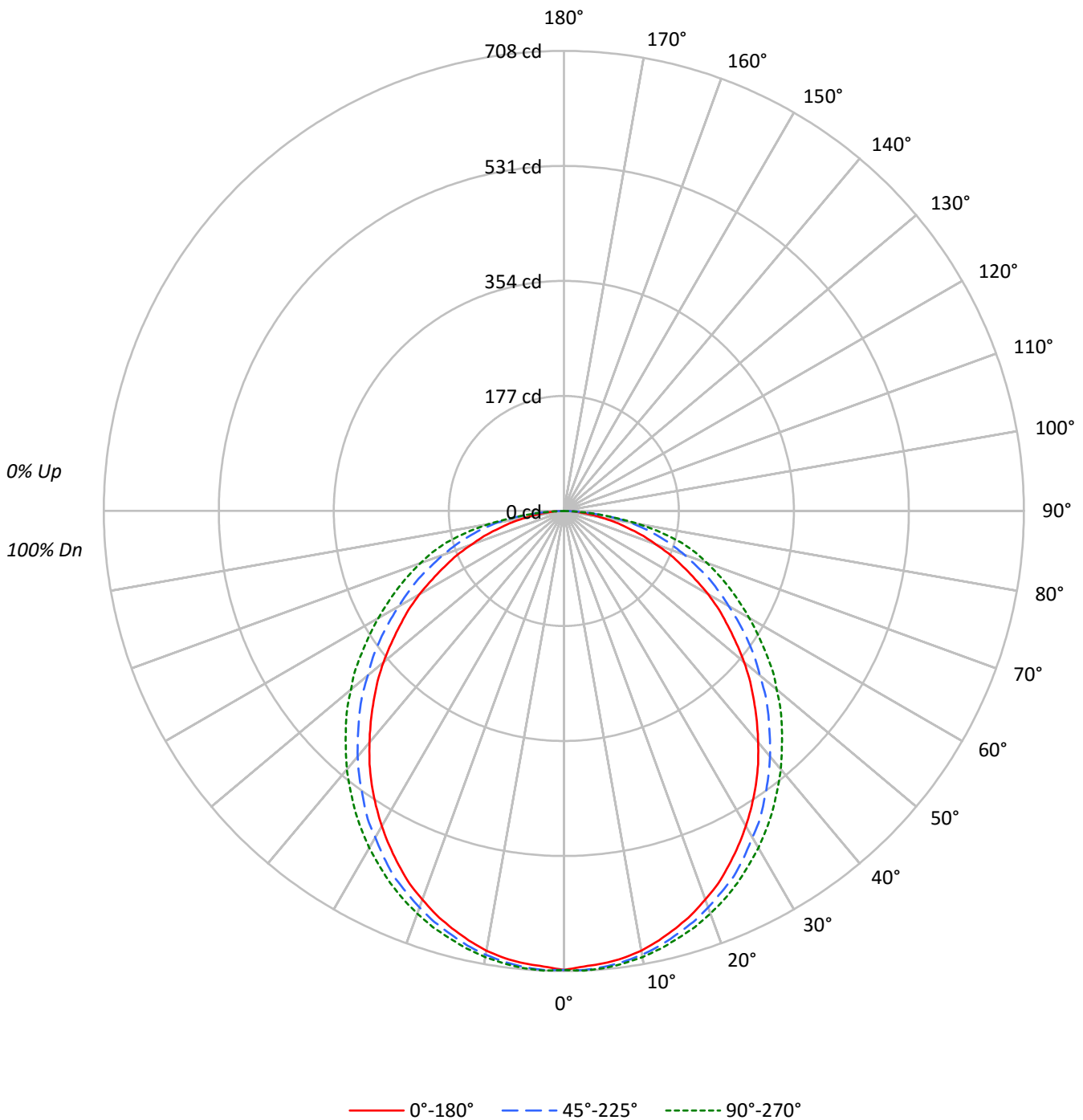
Input Watts (W): 18.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 22FC22-24HE-UNV-L82765-S-CP250-W2A-U-2700K

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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1901	1901	1901
5°	1888	1903	1908
10°	1877	1895	1905
15°	1852	1878	1896
20°	1822	1859	1888
25°	1786	1840	1876
30°	1740	1803	1860
35°	1692	1770	1843
40°	1635	1735	1825
45°	1575	1694	1806
50°	1517	1648	1790
55°	1445	1618	1778
60°	1381	1579	1772
65°	1288	1570	1792
70°	1186	1555	1845
75°	1071	1577	1941
80°	927	1624	1824
85°	766	1362	1362



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.8	3.4
10°-20°	190.1	9.6
20°-30°	284.4	14.4
30°-40°	336.8	17.1
40°-50°	343.2	17.4
50°-60°	307.6	15.6
60°-70°	240.9	12.2
70°-80°	155.3	7.9
80°-90°	45.9	2.3
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°	541.3	27.5
0°-40°	878.1	44.5
0°-60°	1529.0	77.6
0°-90°	1971.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1971.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	706	706	706	706	706	
5°	699	701	704	705	706	66
15°	665	669	674	680	680	187
25°	601	607	620	628	632	277
35°	515	521	539	556	561	322
45°	414	423	445	468	474	320
55°	308	318	345	369	379	276
65°	202	214	246	270	281	201
75°	103	119	152	178	187	110
85°	25	34	44	44	44	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	706.3	706.3	706.3	706.3	706.3
2.5°	701.7	703.5	707.2	708.1	708.1
5°	698.9	700.8	704.4	705.4	706.3
7.5°	694.3	695.2	699.8	701.7	702.6
10°	687.0	688.8	693.4	696.2	697.1
12.5°	676.8	679.6	685.1	688.8	689.7
15°	664.9	668.6	674.1	679.6	680.5
17.5°	652.0	655.7	663.0	669.5	671.3
20°	636.4	641.0	649.3	656.6	659.4
22.5°	620.7	624.4	634.5	643.7	646.5
25°	601.4	607.0	619.8	628.1	631.8
27.5°	581.2	587.6	600.5	611.5	615.2
30°	560.1	566.5	580.3	594.1	598.7
32.5°	538.0	545.3	561.9	575.7	580.3
35°	515.0	521.4	538.9	555.5	561.0
37.5°	491.1	496.6	516.8	534.3	539.8
40°	465.3	472.7	493.8	514.1	519.6
42.5°	439.6	447.9	469.0	491.1	496.6
45°	413.8	423.0	445.1	468.1	474.5
47.5°	389.0	396.4	421.2	443.3	452.5
50°	362.3	369.7	393.6	418.4	427.6
52.5°	334.7	344.9	370.6	394.5	405.6
55°	308.1	318.2	344.9	368.8	378.9
57.5°	283.2	291.5	319.1	343.9	354.1
60°	256.6	263.9	293.4	320.0	329.2
62.5°	228.1	239.1	269.4	294.3	305.3
65°	202.3	214.3	246.5	270.4	281.4
67.5°	178.4	189.4	220.7	246.5	258.4
70°	150.8	165.5	197.7	223.5	234.5
72.5°	128.7	141.6	174.7	200.5	212.4
75°	103.0	118.6	151.7	177.5	186.7
77.5°	81.8	97.5	128.7	149.0	153.6
80°	59.8	75.4	104.8	115.0	117.7
82.5°	40.5	55.2	75.4	78.2	79.1
85°	24.8	34.0	44.1	44.1	44.1
87.5°	12.0	13.8	15.6	14.7	14.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)