

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: P308955

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-S-CP250-W2A-U-4500K**

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: P308955
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-4500K
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: 2183.0 lumens
Efficiency: N/A
Efficacy: 113.1 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

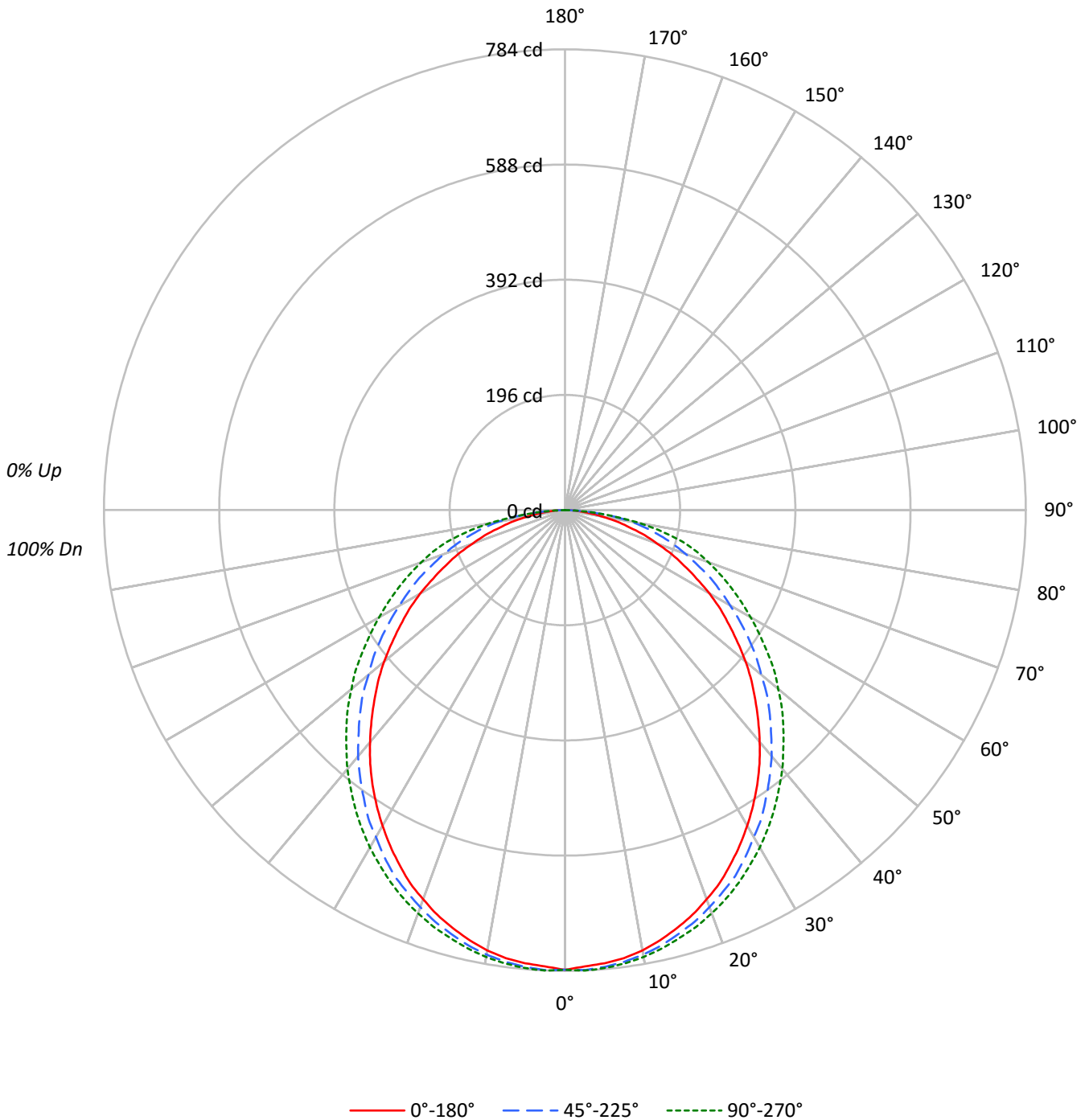
Input Watts (W): 19.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2105	2105	2105
5°	2091	2108	2113
10°	2079	2099	2110
15°	2052	2080	2100
20°	2018	2059	2091
25°	1978	2038	2078
30°	1927	1997	2060
35°	1874	1961	2041
40°	1811	1922	2022
45°	1744	1876	2000
50°	1680	1825	1983
55°	1601	1792	1969
60°	1530	1749	1962
65°	1427	1738	1985
70°	1314	1723	2043
75°	1186	1748	2150
80°	1026	1799	2021
85°	849	1510	1510



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.0	3.4
10°-20°	210.5	9.6
20°-30°	315.0	14.4
30°-40°	373.0	17.1
40°-50°	380.2	17.4
50°-60°	340.7	15.6
60°-70°	266.8	12.2
70°-80°	172.0	7.9
80°-90°	50.8	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°	599.5	27.5
0°-40°	972.5	44.5
0°-60°	1693.4	77.6
0°-90°	2183.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2183.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	782	782	782	782	782	
5°	774	776	780	781	782	73
15°	736	740	747	753	754	208
25°	666	672	686	696	700	307
35°	570	578	597	615	621	356
45°	458	468	493	518	526	354
55°	341	352	382	408	420	306
65°	224	237	273	300	312	223
75°	114	131	168	197	207	122
85°	28	38	49	49	49	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	782.2	782.2	782.2	782.2	782.2
2.5°	777.1	779.2	783.3	784.3	784.3
5°	774.1	776.1	780.2	781.2	782.2
7.5°	769.0	770.0	775.1	777.1	778.2
10°	760.8	762.9	768.0	771.0	772.1
12.5°	749.6	752.7	758.8	762.9	763.9
15°	736.4	740.5	746.6	752.7	753.7
17.5°	722.1	726.2	734.4	741.5	743.5
20°	704.8	709.9	719.1	727.2	730.3
22.5°	687.5	691.6	702.8	713.0	716.0
25°	666.1	672.2	686.5	695.7	699.7
27.5°	643.7	650.8	665.1	677.3	681.4
30°	620.3	627.4	642.7	658.0	663.1
32.5°	595.8	604.0	622.3	637.6	642.7
35°	570.4	577.5	596.9	615.2	621.3
37.5°	543.9	550.0	572.4	591.8	597.9
40°	515.4	523.5	547.0	569.4	575.5
42.5°	486.9	496.0	519.5	543.9	550.0
45°	458.3	468.5	493.0	518.4	525.6
47.5°	430.8	439.0	466.5	490.9	501.1
50°	401.3	409.5	435.9	463.4	473.6
52.5°	370.7	382.0	410.5	437.0	449.2
55°	341.2	352.4	382.0	408.4	419.6
57.5°	313.7	322.9	353.4	380.9	392.1
60°	284.2	292.3	324.9	354.5	364.6
62.5°	252.6	264.8	298.4	325.9	338.2
65°	224.1	237.3	273.0	299.5	311.7
67.5°	197.6	209.8	244.4	273.0	286.2
70°	167.0	183.3	219.0	247.5	259.7
72.5°	142.6	156.9	193.5	222.0	235.3
75°	114.1	131.4	168.1	196.6	206.8
77.5°	90.6	108.0	142.6	165.0	170.1
80°	66.2	83.5	116.1	127.3	130.4
82.5°	44.8	61.1	83.5	86.6	87.6
85°	27.5	37.7	48.9	48.9	48.9
87.5°	13.2	15.3	17.3	16.3	16.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)