

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: P308687

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-CP250-W2A-U-5500K**

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: P308687
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-CP250-W2A-U-5500K
Description: 2'X2' TROFFER LED MODULE, RIBBED 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: 2118.0 lumens
Efficiency: N/A
Efficacy: 109.2 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

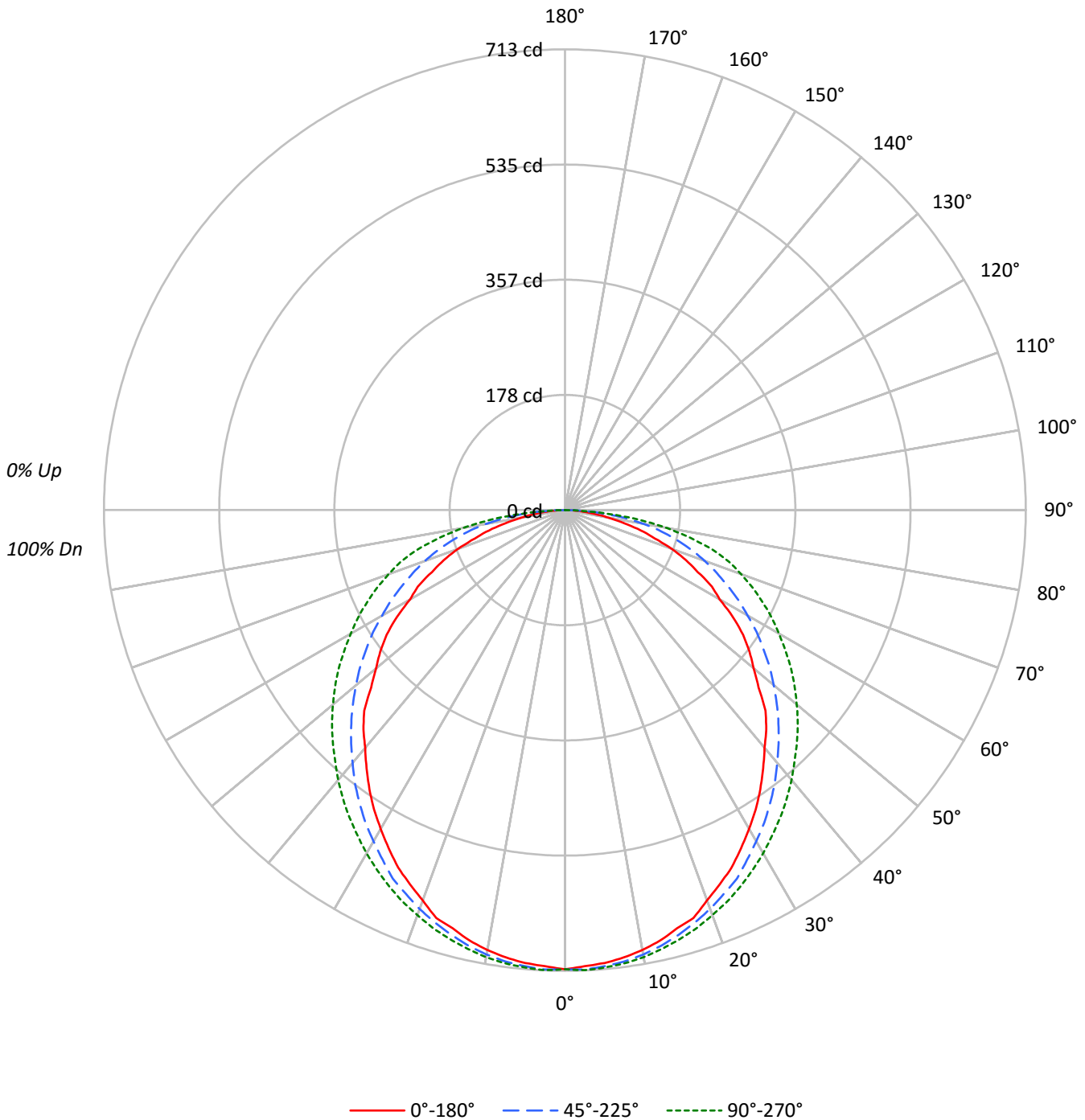
Input Watts (W): 19.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1912	1912	1912
5°	1900	1914	1920
10°	1889	1908	1920
15°	1867	1895	1915
20°	1840	1881	1910
25°	1812	1869	1908
30°	1770	1840	1906
35°	1732	1818	1908
40°	1688	1795	1916
45°	1670	1778	1933
50°	1596	1765	1961
55°	1579	1760	2002
60°	1489	1757	2057
65°	1446	1769	2150
70°	1388	1810	2281
75°	1264	1865	2456
80°	1083	1932	2483
85°	877	1846	2127



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.2	3.2
10°-20°	191.8	9.1
20°-30°	288.7	13.6
30°-40°	346.5	16.4
40°-50°	362.1	17.1
50°-60°	337.5	15.9
60°-70°	276.8	13.1
70°-80°	186.5	8.8
80°-90°	60.7	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°	547.8	25.9
0°-40°	894.3	42.2
0°-60°	1593.9	75.3
0°-90°	2118.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2118.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	711	711	711	711	711	
5°	704	706	709	710	711	67
15°	670	674	680	686	687	189
25°	610	614	630	639	643	281
35°	527	534	554	573	581	330
45°	439	442	467	496	508	335
55°	336	343	375	411	427	298
65°	227	237	278	318	338	226
75°	122	135	179	220	236	128
85°	28	40	60	70	69	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	710.6	710.6	710.6	710.6	710.6
2.5°	706.6	708.6	711.6	712.6	712.6
5°	703.5	705.5	708.6	709.6	710.6
7.5°	698.4	700.5	704.5	706.6	707.6
10°	691.3	693.4	698.4	701.5	702.5
12.5°	682.2	684.3	690.3	694.4	695.4
15°	670.1	674.1	680.2	686.3	687.3
17.5°	661.9	660.9	669.0	676.1	678.2
20°	642.7	647.8	656.9	665.0	667.0
22.5°	626.5	630.5	642.7	651.8	655.9
25°	610.3	614.3	629.5	638.6	642.7
27.5°	590.0	596.1	610.3	623.4	628.5
30°	569.7	575.8	592.0	607.2	613.3
32.5°	549.4	556.5	573.8	590.0	597.1
35°	527.1	534.2	553.5	572.7	580.9
37.5°	503.8	512.9	533.2	554.5	563.6
40°	480.5	489.6	510.9	535.2	545.4
42.5°	461.2	465.3	489.6	516.0	526.1
45°	438.9	442.0	467.3	495.7	507.9
47.5°	406.5	417.6	445.0	476.4	488.6
50°	381.2	393.3	421.7	455.2	468.3
52.5°	359.9	368.0	399.4	432.9	448.1
55°	336.5	342.6	375.1	410.6	426.8
57.5°	308.2	319.3	351.8	388.2	404.5
60°	276.7	290.9	326.4	365.9	382.2
62.5°	256.5	264.6	303.1	342.6	360.9
65°	227.1	237.2	277.8	318.3	337.6
67.5°	202.7	212.9	254.4	295.0	314.2
70°	176.4	186.5	230.1	270.7	289.9
72.5°	146.0	160.2	205.8	246.3	266.6
75°	121.6	134.8	179.4	220.0	236.2
77.5°	94.3	111.5	153.1	186.5	198.7
80°	69.9	87.2	124.7	149.0	160.2
82.5°	47.6	64.9	93.3	111.5	117.6
85°	28.4	40.5	59.8	69.9	68.9
87.5°	13.2	17.2	24.3	24.3	23.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)