

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: P308954

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-S-CP250-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: P308954
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-4000K
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: 2145.0 lumens
Efficiency: N/A
Efficacy: 112.3 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

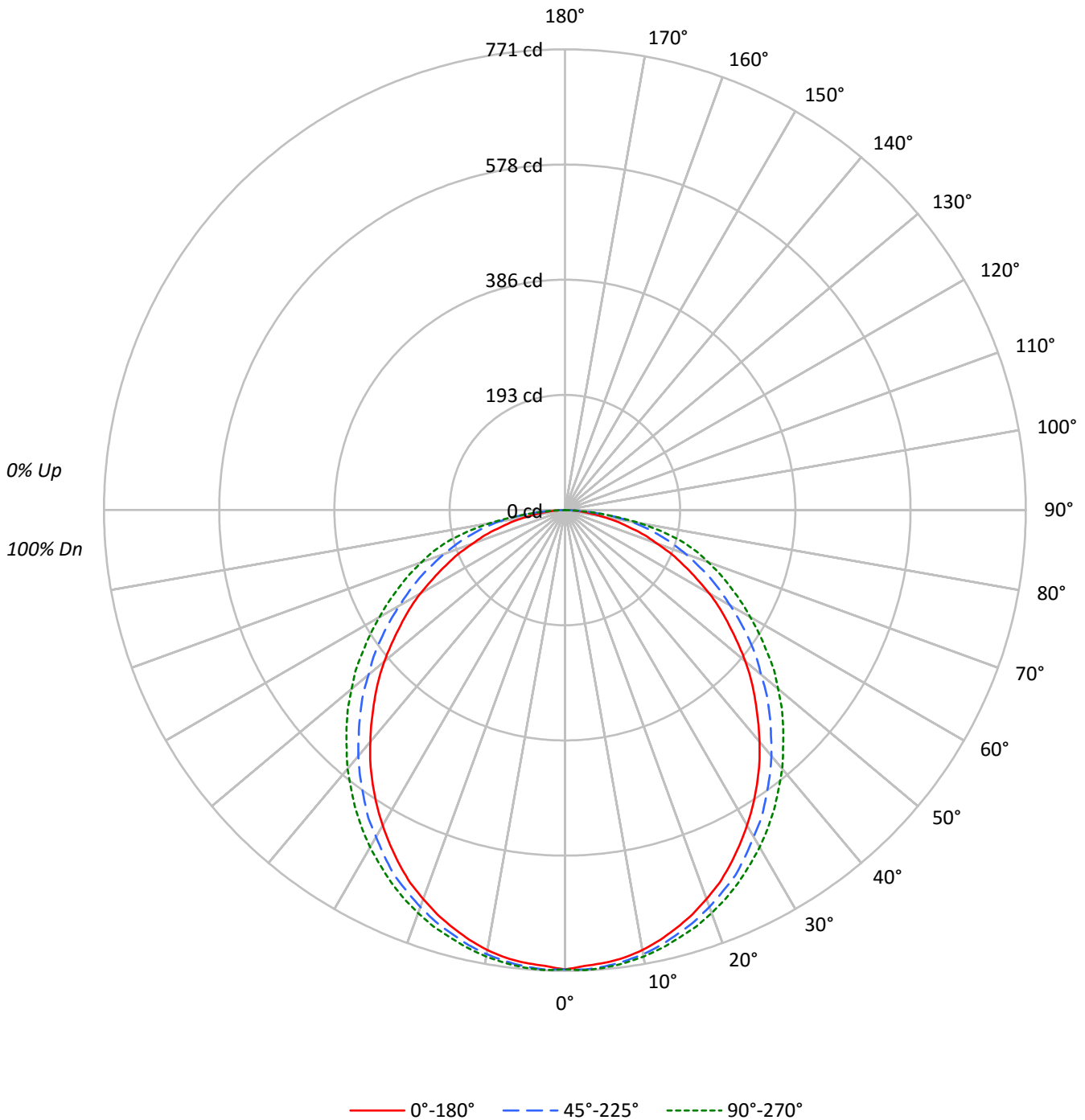
Input Watts (W): 19.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2068	2068	2068
5°	2055	2071	2076
10°	2043	2062	2073
15°	2016	2044	2063
20°	1983	2023	2055
25°	1943	2003	2042
30°	1894	1962	2024
35°	1841	1927	2006
40°	1779	1888	1987
45°	1714	1843	1965
50°	1651	1793	1948
55°	1573	1761	1934
60°	1503	1718	1928
65°	1402	1708	1950
70°	1291	1693	2008
75°	1166	1717	2113
80°	1009	1768	1985
85°	834	1482	1482



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.7	3.4
10°-20°	206.9	9.6
20°-30°	309.5	14.4
30°-40°	366.5	17.1
40°-50°	373.5	17.4
50°-60°	334.8	15.6
60°-70°	262.1	12.2
70°-80°	169.0	7.9
80°-90°	49.9	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°	589.0	27.5
0°-40°	955.6	44.5
0°-60°	1663.9	77.6
0°-90°	2145.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2145.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	769	769	769	769	769	
5°	761	763	767	768	769	72
15°	724	728	734	740	741	204
25°	654	660	674	684	688	301
35°	560	568	586	604	610	350
45°	450	460	484	509	516	348
55°	335	346	375	401	412	301
65°	220	233	268	294	306	219
75°	112	129	165	193	203	120
85°	27	37	48	48	48	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	768.6	768.6	768.6	768.6	768.6
2.5°	763.6	765.6	769.6	770.6	770.6
5°	760.6	762.6	766.6	767.6	768.6
7.5°	755.6	756.6	761.6	763.6	764.6
10°	747.6	749.6	754.6	757.6	758.6
12.5°	736.6	739.6	745.6	749.6	750.6
15°	723.6	727.6	733.6	739.6	740.6
17.5°	709.6	713.6	721.6	728.6	730.6
20°	692.6	697.6	706.6	714.6	717.6
22.5°	675.5	679.5	690.6	700.6	703.6
25°	654.5	660.5	674.5	683.6	687.6
27.5°	632.5	639.5	653.5	665.5	669.5
30°	609.5	616.5	631.5	646.5	651.5
32.5°	585.5	593.5	611.5	626.5	631.5
35°	560.5	567.5	586.5	604.5	610.5
37.5°	534.4	540.4	562.5	581.5	587.5
40°	506.4	514.4	537.4	559.5	565.5
42.5°	478.4	487.4	510.4	534.4	540.4
45°	450.4	460.4	484.4	509.4	516.4
47.5°	423.3	431.3	458.4	482.4	492.4
50°	394.3	402.3	428.3	455.4	465.4
52.5°	364.3	375.3	403.3	429.3	441.4
55°	335.3	346.3	375.3	401.3	412.3
57.5°	308.2	317.3	347.3	374.3	385.3
60°	279.2	287.2	319.3	348.3	358.3
62.5°	248.2	260.2	293.2	320.3	332.3
65°	220.2	233.2	268.2	294.2	306.2
67.5°	194.2	206.2	240.2	268.2	281.2
70°	164.1	180.1	215.2	243.2	255.2
72.5°	140.1	154.1	190.2	218.2	231.2
75°	112.1	129.1	165.1	193.2	203.2
77.5°	89.1	106.1	140.1	162.1	167.1
80°	65.1	82.1	114.1	125.1	128.1
82.5°	44.0	60.0	82.1	85.1	86.1
85°	27.0	37.0	48.0	48.0	48.0
87.5°	13.0	15.0	17.0	16.0	16.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)