

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: P312915

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-S-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: P312915
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-L83050-S-CA08-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH 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: 2188.0 lumens
Efficiency: N/A
Efficacy: 115.8 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

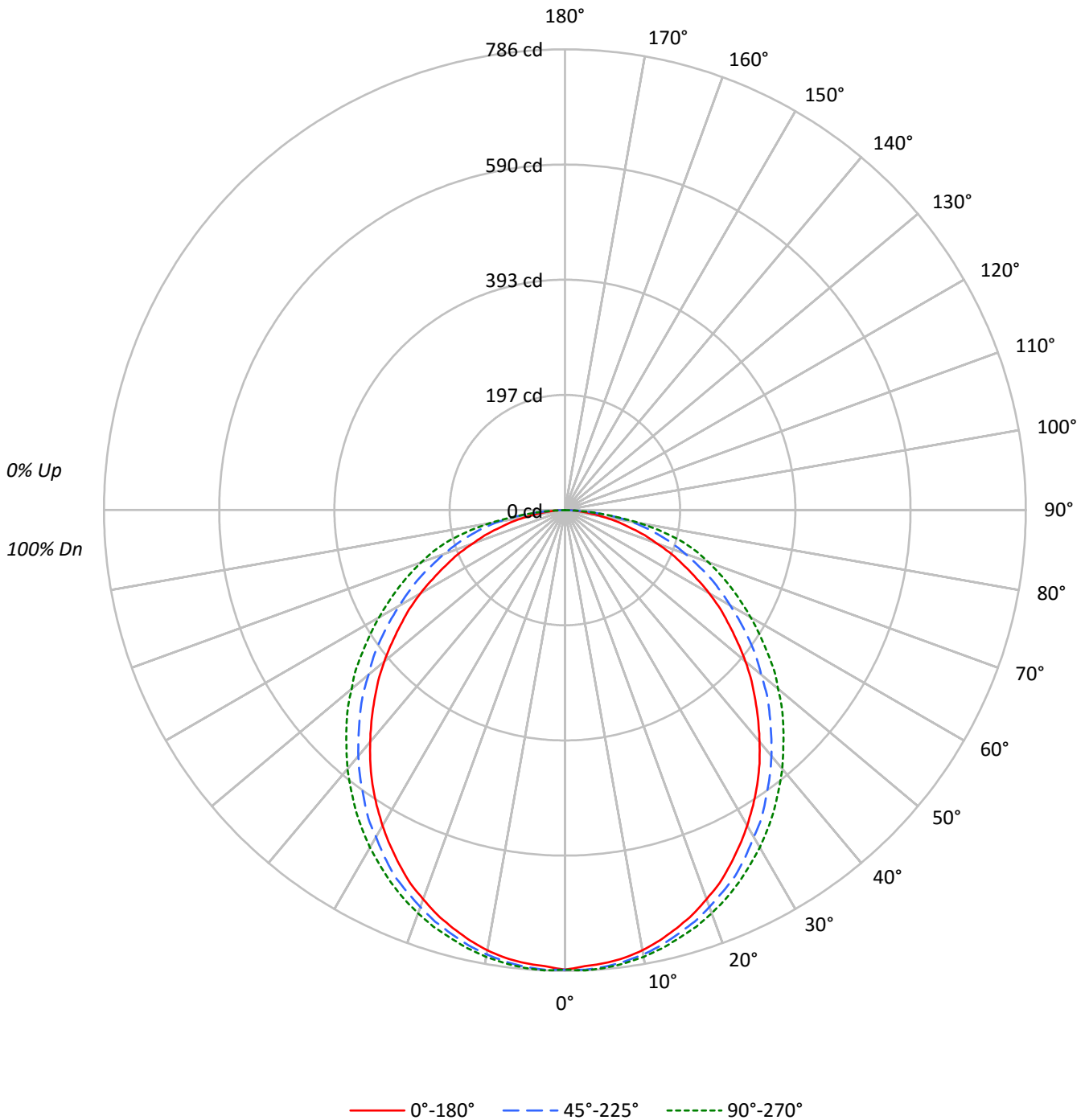
Input Watts (W): 18.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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°	2110	2110	2110
5°	2096	2112	2118
10°	2084	2103	2114
15°	2056	2085	2104
20°	2023	2064	2096
25°	1982	2043	2082
30°	1932	2002	2065
35°	1878	1965	2046
40°	1815	1926	2026
45°	1748	1880	2005
50°	1684	1829	1987
55°	1605	1796	1973
60°	1533	1753	1967
65°	1430	1742	1989
70°	1317	1727	2048
75°	1188	1751	2154
80°	1029	1804	2025
85°	852	1513	1513



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.1	3.4
10°-20°	211.0	9.6
20°-30°	315.7	14.4
30°-40°	373.9	17.1
40°-50°	381.0	17.4
50°-60°	341.5	15.6
60°-70°	267.4	12.2
70°-80°	172.4	7.9
80°-90°	50.9	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°	600.9	27.5
0°-40°	974.7	44.5
0°-60°	1697.3	77.6
0°-90°	2188.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2188.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	784	784	784	784	784	
5°	776	778	782	783	784	74
15°	738	742	748	754	755	208
25°	668	674	688	697	701	307
35°	572	579	598	617	623	357
45°	459	470	494	520	527	355
55°	342	353	383	409	421	307
65°	225	238	274	300	312	223
75°	114	132	168	197	207	123
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°	784.0	784.0	784.0	784.0	784.0
2.5°	778.9	781.0	785.0	786.1	786.1
5°	775.9	777.9	782.0	783.0	784.0
7.5°	770.8	771.8	776.9	778.9	779.9
10°	762.6	764.6	769.7	772.8	773.8
12.5°	751.4	754.4	760.5	764.6	765.7
15°	738.1	742.2	748.3	754.4	755.4
17.5°	723.8	727.9	736.0	743.2	745.2
20°	706.4	711.5	720.7	728.9	732.0
22.5°	689.1	693.2	704.4	714.6	717.7
25°	667.6	673.8	688.1	697.3	701.3
27.5°	645.2	652.3	666.6	678.9	683.0
30°	621.7	628.9	644.2	659.5	664.6
32.5°	597.2	605.4	623.8	639.1	644.2
35°	571.7	578.8	598.2	616.6	622.7
37.5°	545.1	551.3	573.7	593.1	599.3
40°	516.6	524.7	548.2	570.7	576.8
42.5°	488.0	497.2	520.6	545.1	551.3
45°	459.4	469.6	494.1	519.6	526.8
47.5°	431.8	440.0	467.6	492.1	502.3
50°	402.2	410.4	436.9	464.5	474.7
52.5°	371.6	382.8	411.4	438.0	450.2
55°	342.0	353.2	382.8	409.4	420.6
57.5°	314.4	323.6	354.2	381.8	393.0
60°	284.8	293.0	325.7	355.3	365.5
62.5°	253.2	265.4	299.1	326.7	338.9
65°	224.6	237.9	273.6	300.1	312.4
67.5°	198.0	210.3	245.0	273.6	286.9
70°	167.4	183.8	219.5	248.1	260.3
72.5°	142.9	157.2	194.0	222.5	235.8
75°	114.3	131.7	168.4	197.0	207.2
77.5°	90.9	108.2	142.9	165.4	170.5
80°	66.4	83.7	116.4	127.6	130.7
82.5°	44.9	61.3	83.7	86.8	87.8
85°	27.6	37.8	49.0	49.0	49.0
87.5°	13.3	15.3	17.4	16.3	16.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)