

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: P312691

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-RDP-CA08-W2A-U-3500K**

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: P312691
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-39HE-UNV-L83050-RDP-CA08-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (168) 3500K 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: 2374.0 lumens
Efficiency: N/A
Efficacy: 73.3 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

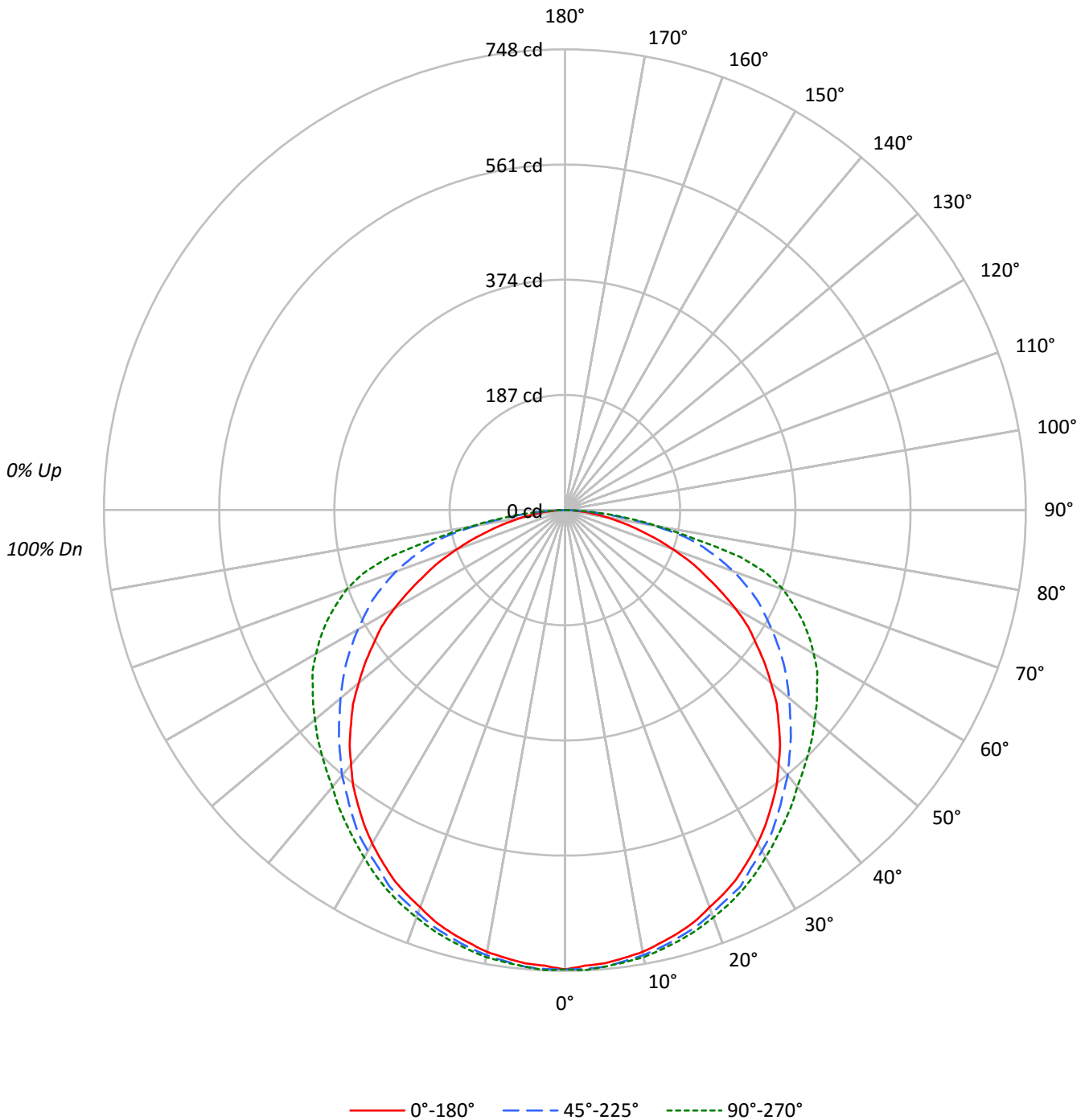
Input Watts (W): 32.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2007	2007	2007
5°	1995	2010	2010
10°	1990	2004	2014
15°	1980	2000	2014
20°	1965	1995	2015
25°	1960	2002	2022
30°	1943	1986	2024
35°	1922	1979	2037
40°	1896	1975	2061
45°	1867	1974	2127
50°	1828	1989	2215
55°	1778	2032	2343
60°	1720	2087	2510
65°	1601	2190	2713
70°	1471	2294	2968
75°	1289	2415	3068
80°	1110	2300	2408
85°	969	1670	1834



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.5	3.0
10°-20°	202.5	8.5
20°-30°	309.0	13.0
30°-40°	377.3	15.9
40°-50°	403.4	17.0
50°-60°	389.4	16.4
60°-70°	335.2	14.1
70°-80°	226.8	9.6
80°-90°	59.8	2.5
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°	582.1	24.5
0°-40°	959.4	40.4
0°-60°	1752.2	73.8
0°-90°	2374.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2374.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	746	746	746	746	746	
5°	739	740	744	744	744	70
15°	711	712	718	721	723	201
25°	660	664	674	678	681	304
35°	585	590	602	615	620	366
45°	491	500	519	545	559	379
55°	379	391	433	477	500	340
65°	252	276	344	398	426	250
75°	124	164	232	279	295	133
85°	31	44	54	56	59	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	745.7	745.7	745.7	745.7	745.7
2.5°	740.5	742.2	745.7	745.7	747.5
5°	738.7	740.5	744.0	744.0	744.0
7.5°	733.5	735.2	738.7	740.5	740.5
10°	728.3	730.0	733.5	735.2	737.0
12.5°	719.5	721.3	726.5	730.0	730.0
15°	710.8	712.5	717.8	721.3	723.0
17.5°	700.3	703.8	709.0	712.5	714.3
20°	686.3	689.8	696.8	702.1	703.8
22.5°	674.1	677.6	684.6	689.8	693.3
25°	660.1	663.6	674.1	677.6	681.1
27.5°	642.7	646.2	654.9	661.9	667.1
30°	625.2	628.7	639.2	647.9	651.4
32.5°	606.0	611.2	623.5	630.5	635.7
35°	585.0	590.3	602.5	614.7	620.0
37.5°	564.1	569.3	581.6	597.3	604.3
40°	539.6	546.6	562.3	583.3	586.8
42.5°	516.9	525.7	539.6	564.1	572.8
45°	490.7	499.5	518.7	544.9	558.8
47.5°	466.3	475.0	496.0	527.4	544.9
50°	436.6	448.8	475.0	511.7	529.2
52.5°	408.7	419.1	454.1	494.2	515.2
55°	379.0	391.2	433.1	476.8	499.5
57.5°	352.8	363.3	410.4	459.3	485.5
60°	319.6	333.6	387.7	440.1	466.3
62.5°	284.7	305.6	365.0	419.1	447.1
65°	251.5	275.9	344.0	398.2	426.1
67.5°	221.8	248.0	317.8	375.5	401.7
70°	186.9	220.0	291.6	347.5	377.2
72.5°	155.4	192.1	262.0	317.8	344.0
75°	124.0	164.2	232.3	279.4	295.1
77.5°	96.1	134.5	199.1	213.1	214.8
80°	71.6	106.5	148.4	150.2	155.4
82.5°	48.9	75.1	96.1	104.8	106.5
85°	31.4	43.7	54.1	55.9	59.4
87.5°	14.0	15.7	19.2	17.5	17.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)