

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: P312690

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-RDP-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: P312690
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-3000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 2244.0 lumens
Efficiency: N/A
Efficacy: 69.5 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

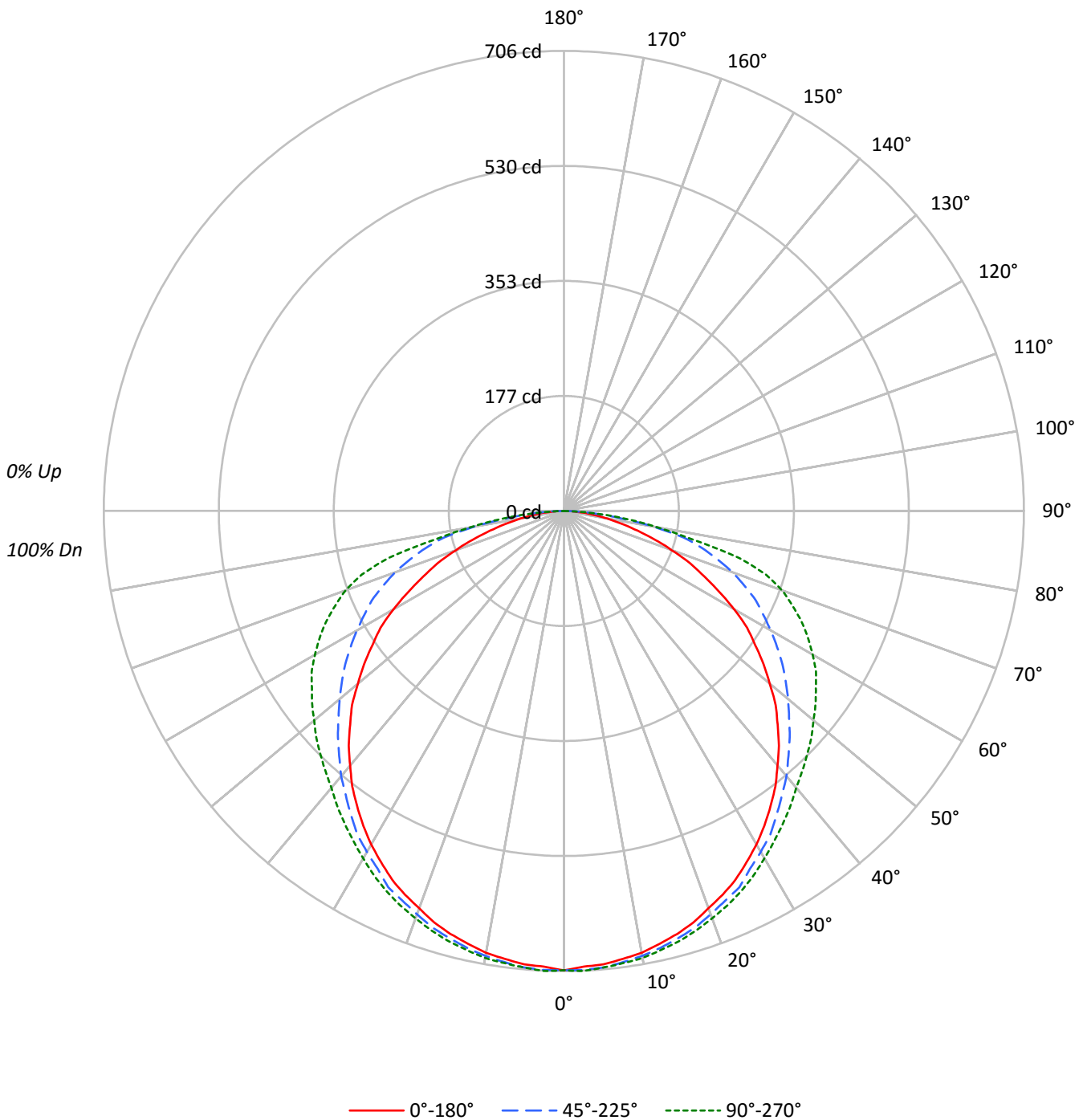
Input Watts (W): 32.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1897	1897	1897
5°	1886	1900	1900
10°	1881	1894	1903
15°	1872	1890	1904
20°	1858	1886	1905
25°	1853	1892	1912
30°	1836	1877	1913
35°	1817	1871	1925
40°	1792	1867	1949
45°	1765	1866	2010
50°	1728	1880	2094
55°	1681	1921	2215
60°	1626	1972	2372
65°	1514	2071	2565
70°	1389	2169	2806
75°	1219	2283	2901
80°	1049	2174	2276
85°	917	1581	1732



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.7	3.0
10°-20°	191.4	8.5
20°-30°	292.1	13.0
30°-40°	356.6	15.9
40°-50°	381.3	17.0
50°-60°	368.1	16.4
60°-70°	316.8	14.1
70°-80°	214.4	9.6
80°-90°	56.6	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°	550.2	24.5
0°-40°	906.8	40.4
0°-60°	1656.2	73.8
0°-90°	2244.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2244.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	705	705	705	705	705	
5°	698	700	703	703	703	66
15°	672	674	678	682	683	190
25°	624	627	637	640	644	287
35°	553	558	570	581	586	346
45°	464	472	490	515	528	358
55°	358	370	409	451	472	321
65°	238	261	325	376	403	236
75°	117	155	220	264	279	126
85°	30	41	51	53	56	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	704.9	704.9	704.9	704.9	704.9
2.5°	699.9	701.6	704.9	704.9	706.5
5°	698.3	699.9	703.2	703.2	703.2
7.5°	693.3	695.0	698.3	699.9	699.9
10°	688.4	690.0	693.3	695.0	696.6
12.5°	680.1	681.8	686.7	690.0	690.0
15°	671.9	673.5	678.5	681.8	683.4
17.5°	662.0	665.3	670.2	673.5	675.2
20°	648.8	652.1	658.7	663.6	665.3
22.5°	637.2	640.5	647.1	652.1	655.4
25°	624.0	627.3	637.2	640.5	643.8
27.5°	607.5	610.8	619.0	625.6	630.6
30°	591.0	594.3	604.2	612.4	615.7
32.5°	572.8	577.8	589.3	595.9	600.9
35°	553.0	558.0	569.5	581.1	586.0
37.5°	533.2	538.2	549.7	564.6	571.2
40°	510.1	516.7	531.5	551.4	554.7
42.5°	488.6	496.9	510.1	533.2	541.5
45°	463.9	472.1	490.3	515.0	528.2
47.5°	440.8	449.0	468.8	498.5	515.0
50°	412.7	424.2	449.0	483.7	500.2
52.5°	386.3	396.2	429.2	467.2	487.0
55°	358.2	369.8	409.4	450.7	472.1
57.5°	333.5	343.4	387.9	434.2	458.9
60°	302.1	315.3	366.5	416.0	440.8
62.5°	269.1	288.9	345.0	396.2	422.6
65°	237.7	260.8	325.2	376.4	402.8
67.5°	209.6	234.4	300.4	354.9	379.7
70°	176.6	208.0	275.7	328.5	356.6
72.5°	146.9	181.6	247.6	300.4	325.2
75°	117.2	155.2	219.6	264.1	279.0
77.5°	90.8	127.1	188.2	201.4	203.0
80°	67.7	100.7	140.3	142.0	146.9
82.5°	46.2	71.0	90.8	99.0	100.7
85°	29.7	41.3	51.2	52.8	56.1
87.5°	13.2	14.9	18.2	16.5	16.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)