

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: P308510

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-RDP-CA08-W2A-U-2700K**

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: P308510
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-L82765-RDP-CA08-W2A-U-2700K
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: 2179.0 lumens
Efficiency: N/A
Efficacy: 67.3 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

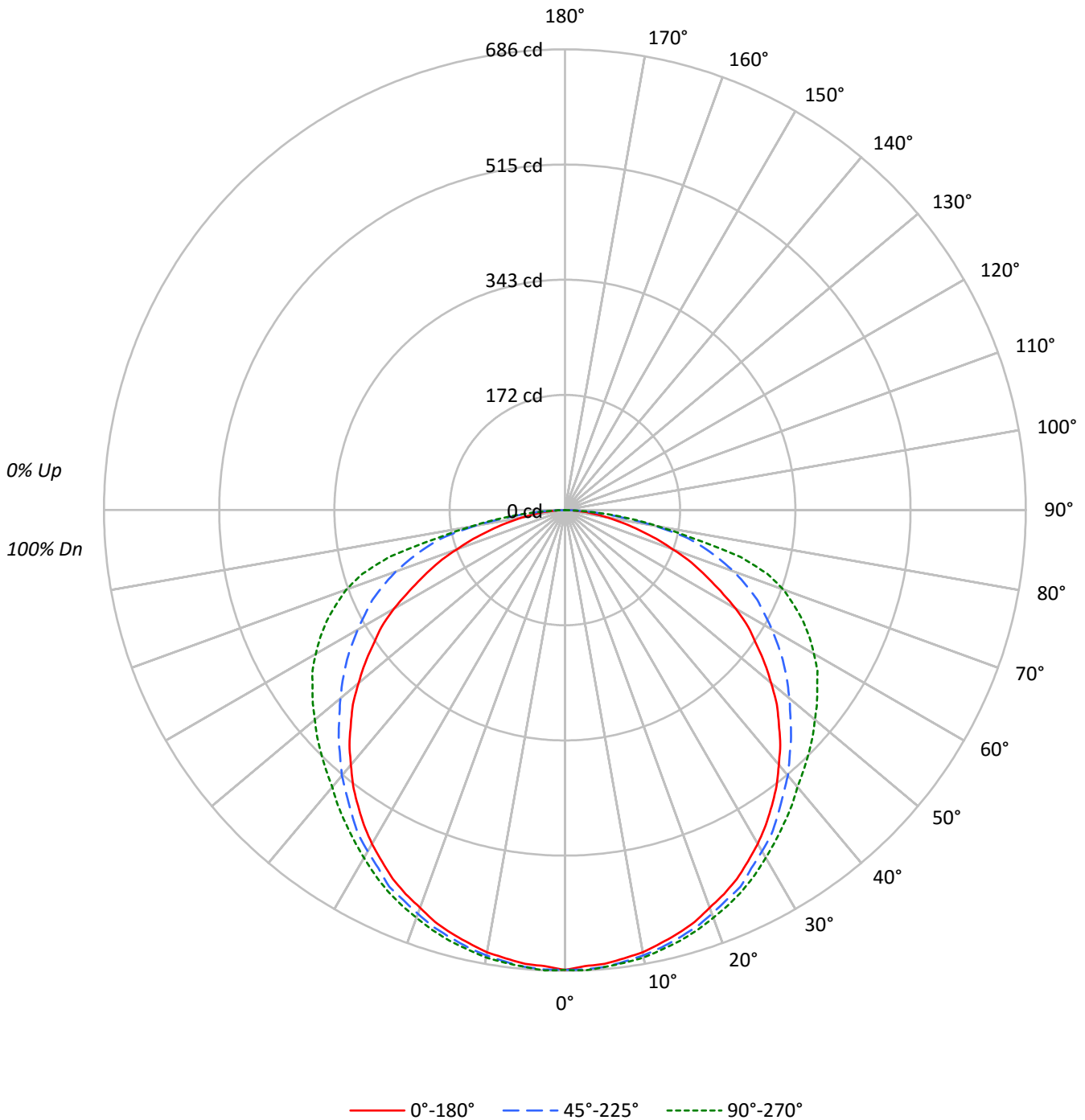
Input Watts (W): 32.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1842	1842	1842
5°	1832	1845	1845
10°	1826	1840	1848
15°	1818	1835	1849
20°	1804	1832	1850
25°	1799	1837	1856
30°	1783	1823	1858
35°	1764	1817	1869
40°	1740	1813	1892
45°	1714	1812	1952
50°	1677	1825	2033
55°	1632	1865	2151
60°	1579	1915	2303
65°	1470	2011	2490
70°	1349	2106	2724
75°	1183	2217	2817
80°	1018	2112	2211
85°	892	1535	1683



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.7	3.0
10°-20°	185.9	8.5
20°-30°	283.6	13.0
30°-40°	346.3	15.9
40°-50°	370.3	17.0
50°-60°	357.4	16.4
60°-70°	307.7	14.1
70°-80°	208.2	9.6
80°-90°	54.9	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°	534.3	24.5
0°-40°	880.6	40.4
0°-60°	1608.3	73.8
0°-90°	2179.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2179.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	684	684	684	684	684	
5°	678	680	683	683	683	64
15°	652	654	659	662	664	184
25°	606	609	619	622	625	279
35°	537	542	553	564	569	336
45°	450	458	476	500	513	348
55°	348	359	398	438	458	312
65°	231	253	316	366	391	230
75°	114	151	213	256	271	122
85°	29	40	50	51	54	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	684.5	684.5	684.5	684.5	684.5
2.5°	679.7	681.3	684.5	684.5	686.1
5°	678.1	679.7	682.9	682.9	682.9
7.5°	673.2	674.8	678.1	679.7	679.7
10°	668.4	670.0	673.2	674.8	676.4
12.5°	660.4	662.0	666.8	670.0	670.0
15°	652.4	654.0	658.8	662.0	663.6
17.5°	642.8	646.0	650.8	654.0	655.6
20°	630.0	633.2	639.6	644.4	646.0
22.5°	618.7	621.9	628.4	633.2	636.4
25°	605.9	609.1	618.7	621.9	625.2
27.5°	589.9	593.1	601.1	607.5	612.3
30°	573.9	577.1	586.7	594.7	597.9
32.5°	556.2	561.0	572.3	578.7	583.5
35°	537.0	541.8	553.0	564.2	569.0
37.5°	517.8	522.6	533.8	548.2	554.6
40°	495.3	501.7	516.2	535.4	538.6
42.5°	474.5	482.5	495.3	517.8	525.8
45°	450.4	458.4	476.1	500.1	512.9
47.5°	428.0	436.0	455.2	484.1	500.1
50°	400.7	412.0	436.0	469.7	485.7
52.5°	375.1	384.7	416.8	453.6	472.9
55°	347.8	359.1	397.5	437.6	458.4
57.5°	323.8	333.4	376.7	421.6	445.6
60°	293.3	306.2	355.9	403.9	428.0
62.5°	261.3	280.5	335.0	384.7	410.4
65°	230.8	253.3	315.8	365.5	391.1
67.5°	203.6	227.6	291.7	344.6	368.7
70°	171.5	202.0	267.7	319.0	346.2
72.5°	142.7	176.3	240.4	291.7	315.8
75°	113.8	150.7	213.2	256.5	270.9
77.5°	88.2	123.4	182.7	195.6	197.2
80°	65.7	97.8	136.3	137.9	142.7
82.5°	44.9	68.9	88.2	96.2	97.8
85°	28.9	40.1	49.7	51.3	54.5
87.5°	12.8	14.4	17.6	16.0	16.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)