

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: P308244

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-HRP-CA08-W2A-U-4500K**

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: P308244
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)
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-HRP-CA08-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 2799.0 lumens
Efficiency: N/A
Efficacy: 84.8 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

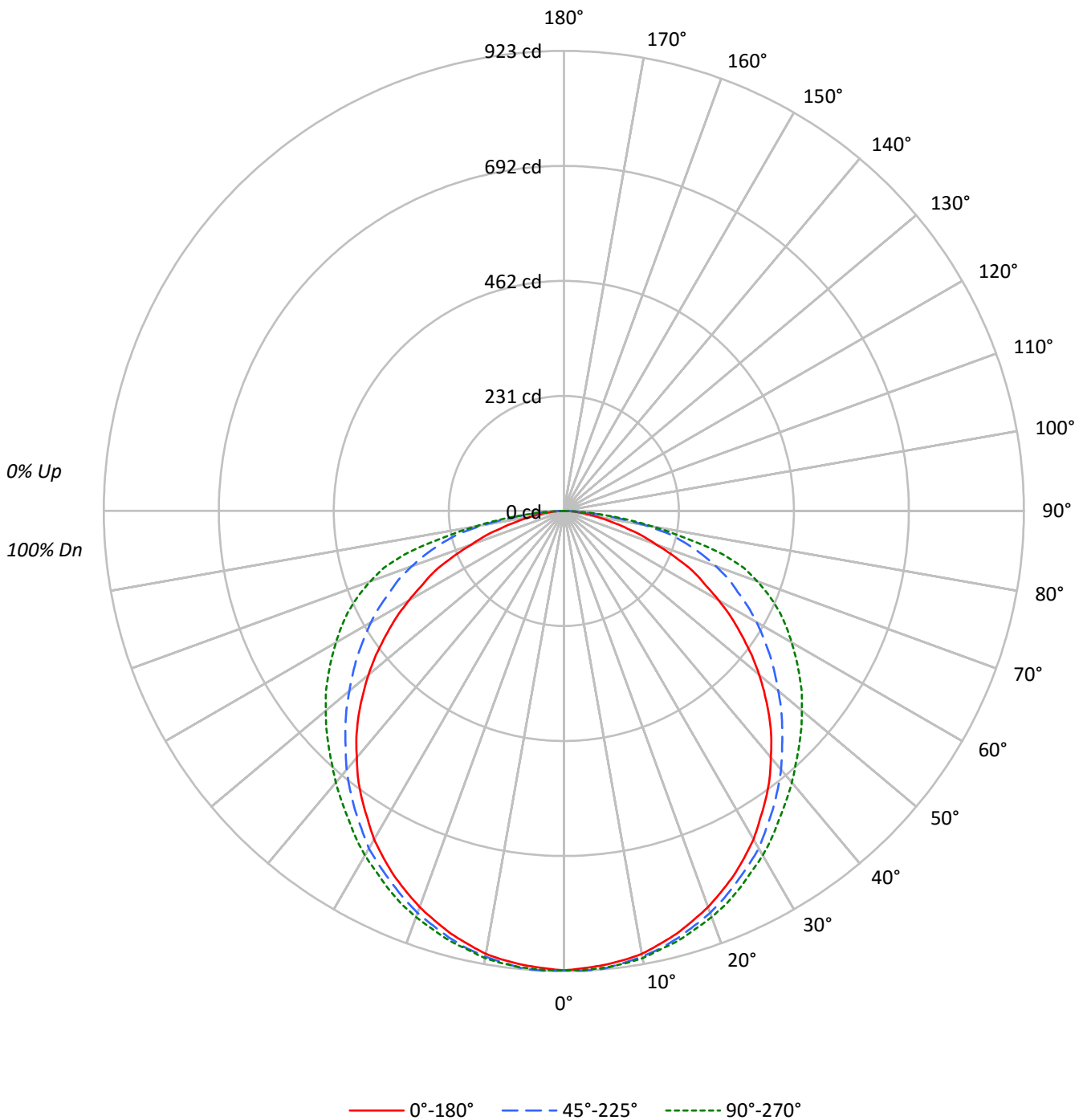
Input Watts (W): 33
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2480	2480	2480
5°	2471	2490	2485
10°	2466	2480	2490
15°	2445	2469	2484
20°	2422	2457	2483
25°	2396	2438	2480
30°	2365	2431	2480
35°	2320	2401	2477
40°	2270	2382	2500
45°	2218	2358	2540
50°	2143	2351	2609
55°	2046	2369	2709
60°	1929	2404	2841
65°	1821	2451	3035
70°	1556	2556	3251
75°	1304	2662	3378
80°	1068	2572	2819
85°	926	1908	2072



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.4	3.1
10°-20°	249.9	8.9
20°-30°	378.7	13.5
30°-40°	457.3	16.3
40°-50°	480.5	17.2
50°-60°	452.1	16.2
60°-70°	376.9	13.5
70°-80°	249.8	8.9
80°-90°	66.6	2.4
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°	715.9	25.6
0°-40°	1173.2	41.9
0°-60°	2105.7	75.2
0°-90°	2799.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2799.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	922	922	922	922	922	
5°	915	916	922	922	920	87
15°	878	881	886	890	892	247
25°	807	812	821	832	835	372
35°	706	713	731	747	754	442
45°	583	592	620	652	667	449
55°	436	456	505	556	577	390
65°	286	311	385	448	477	278
75°	125	175	256	309	325	136
85°	30	46	62	67	67	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	921.7	921.7	921.7	921.7	921.7
2.5°	918.1	919.9	923.4	923.4	921.7
5°	914.6	916.4	921.7	921.7	919.9
7.5°	909.3	911.1	914.6	918.1	916.4
10°	902.3	904.0	907.6	911.1	911.1
12.5°	889.9	891.7	898.7	900.5	900.5
15°	877.5	881.1	886.4	889.9	891.7
17.5°	861.6	865.2	872.2	879.3	879.3
20°	845.8	849.3	858.1	865.2	866.9
22.5°	826.3	831.6	840.5	849.3	852.8
25°	806.9	812.2	821.0	831.6	835.2
27.5°	784.0	789.3	801.6	814.0	815.7
30°	761.0	766.3	782.2	792.8	798.1
32.5°	732.8	739.8	755.7	771.6	776.9
35°	706.3	713.3	731.0	746.9	753.9
37.5°	678.0	685.1	704.5	723.9	732.8
40°	646.2	655.1	678.0	699.2	711.6
42.5°	616.2	625.0	648.0	676.3	688.6
45°	582.7	591.5	619.7	651.5	667.4
47.5°	547.4	558.0	591.5	630.3	646.2
50°	512.0	524.4	561.5	605.6	623.3
52.5°	475.0	490.9	533.2	580.9	602.1
55°	436.1	455.5	505.0	556.2	577.4
57.5°	399.0	416.7	475.0	529.7	552.7
60°	358.4	381.4	446.7	503.2	527.9
62.5°	319.6	344.3	416.7	476.7	503.2
65°	286.0	310.8	384.9	448.5	476.7
67.5°	241.9	275.4	358.4	418.5	446.7
70°	197.8	243.7	324.9	386.7	413.2
72.5°	164.2	208.3	291.3	353.1	377.9
75°	125.4	174.8	256.0	309.0	324.9
77.5°	93.6	144.8	218.9	245.4	247.2
80°	68.9	111.2	166.0	174.8	181.9
82.5°	47.7	77.7	107.7	118.3	121.8
85°	30.0	45.9	61.8	67.1	67.1
87.5°	15.9	17.7	21.2	21.2	21.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)