

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: P312561

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-HRP-CP250-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: P312561
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-L83050-HRP-CP250-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB 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: 2651.0 lumens
Efficiency: N/A
Efficacy: 81.8 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

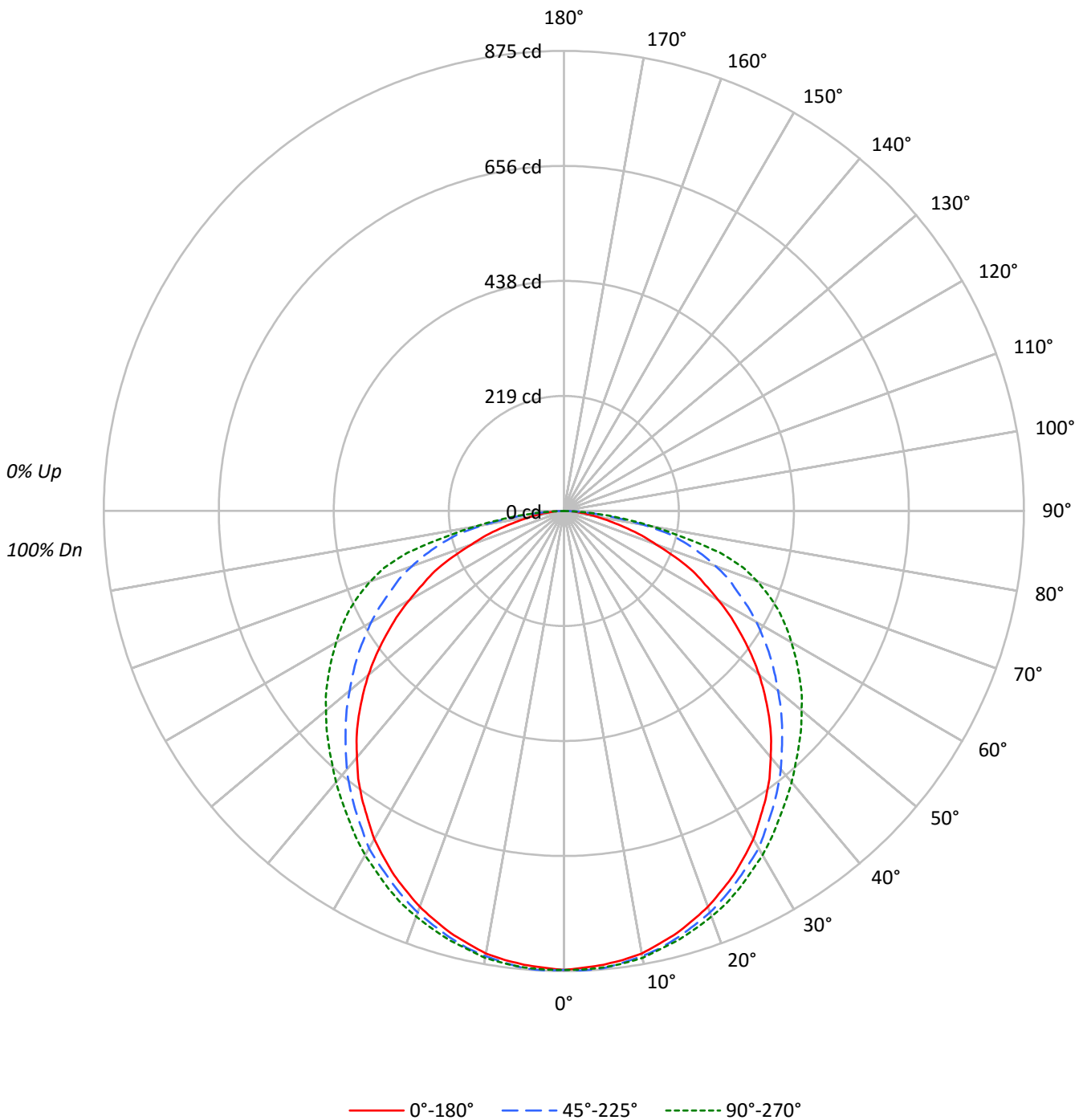
Input Watts (W): 32.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2349	2349	2349
5°	2340	2358	2354
10°	2335	2349	2358
15°	2315	2339	2353
20°	2294	2327	2351
25°	2269	2309	2349
30°	2240	2302	2349
35°	2197	2274	2346
40°	2150	2256	2367
45°	2100	2234	2406
50°	2030	2226	2471
55°	1938	2244	2565
60°	1827	2277	2691
65°	1725	2322	2875
70°	1474	2421	3079
75°	1234	2521	3199
80°	1010	2436	2669
85°	877	1806	1961



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.7	3.1
10°-20°	236.7	8.9
20°-30°	358.7	13.5
30°-40°	433.1	16.3
40°-50°	455.1	17.2
50°-60°	428.2	16.2
60°-70°	357.0	13.5
70°-80°	236.6	8.9
80°-90°	63.0	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°	678.1	25.6
0°-40°	1111.1	41.9
0°-60°	1994.4	75.2
0°-90°	2651.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2651.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	873	873	873	873	873	
5°	866	868	873	873	871	82
15°	831	834	840	843	844	234
25°	764	769	778	788	791	352
35°	669	676	692	707	714	418
45°	552	560	587	617	632	425
55°	413	432	478	527	547	370
65°	271	294	365	425	452	264
75°	119	166	242	293	308	129
85°	28	44	58	64	64	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	872.9	872.9	872.9	872.9	872.9
2.5°	869.6	871.3	874.6	874.6	872.9
5°	866.3	867.9	872.9	872.9	871.3
7.5°	861.2	862.9	866.3	869.6	867.9
10°	854.5	856.2	859.6	862.9	862.9
12.5°	842.8	844.5	851.2	852.9	852.9
15°	831.1	834.5	839.5	842.8	844.5
17.5°	816.1	819.4	826.1	832.8	832.8
20°	801.0	804.4	812.7	819.4	821.1
22.5°	782.6	787.7	796.0	804.4	807.7
25°	764.2	769.3	777.6	787.7	791.0
27.5°	742.5	747.5	759.2	770.9	772.6
30°	720.8	725.8	740.8	750.9	755.9
32.5°	694.0	700.7	715.7	730.8	735.8
35°	668.9	675.6	692.3	707.4	714.1
37.5°	642.2	648.9	667.3	685.6	694.0
40°	612.1	620.4	642.2	662.2	673.9
42.5°	583.6	592.0	613.7	640.5	652.2
45°	551.9	560.2	587.0	617.1	632.1
47.5°	518.4	528.4	560.2	597.0	612.1
50°	485.0	496.7	531.8	573.6	590.3
52.5°	449.9	464.9	505.0	550.2	570.3
55°	413.1	431.5	478.3	526.8	546.8
57.5°	377.9	394.7	449.9	501.7	523.4
60°	339.5	361.2	423.1	476.6	500.0
62.5°	302.7	326.1	394.7	451.5	476.6
65°	270.9	294.3	364.6	424.8	451.5
67.5°	229.1	260.9	339.5	396.3	423.1
70°	187.3	230.8	307.7	366.2	391.3
72.5°	155.5	197.3	275.9	334.5	357.9
75°	118.7	165.6	242.5	292.7	307.7
77.5°	88.6	137.1	207.4	232.5	234.1
80°	65.2	105.4	157.2	165.6	172.2
82.5°	45.2	73.6	102.0	112.0	115.4
85°	28.4	43.5	58.5	63.5	63.5
87.5°	15.1	16.7	20.1	20.1	20.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)