

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: P312541

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-HRP-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: P312541
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-CA08-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 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: 2856.0 lumens
Efficiency: N/A
Efficacy: 88.1 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

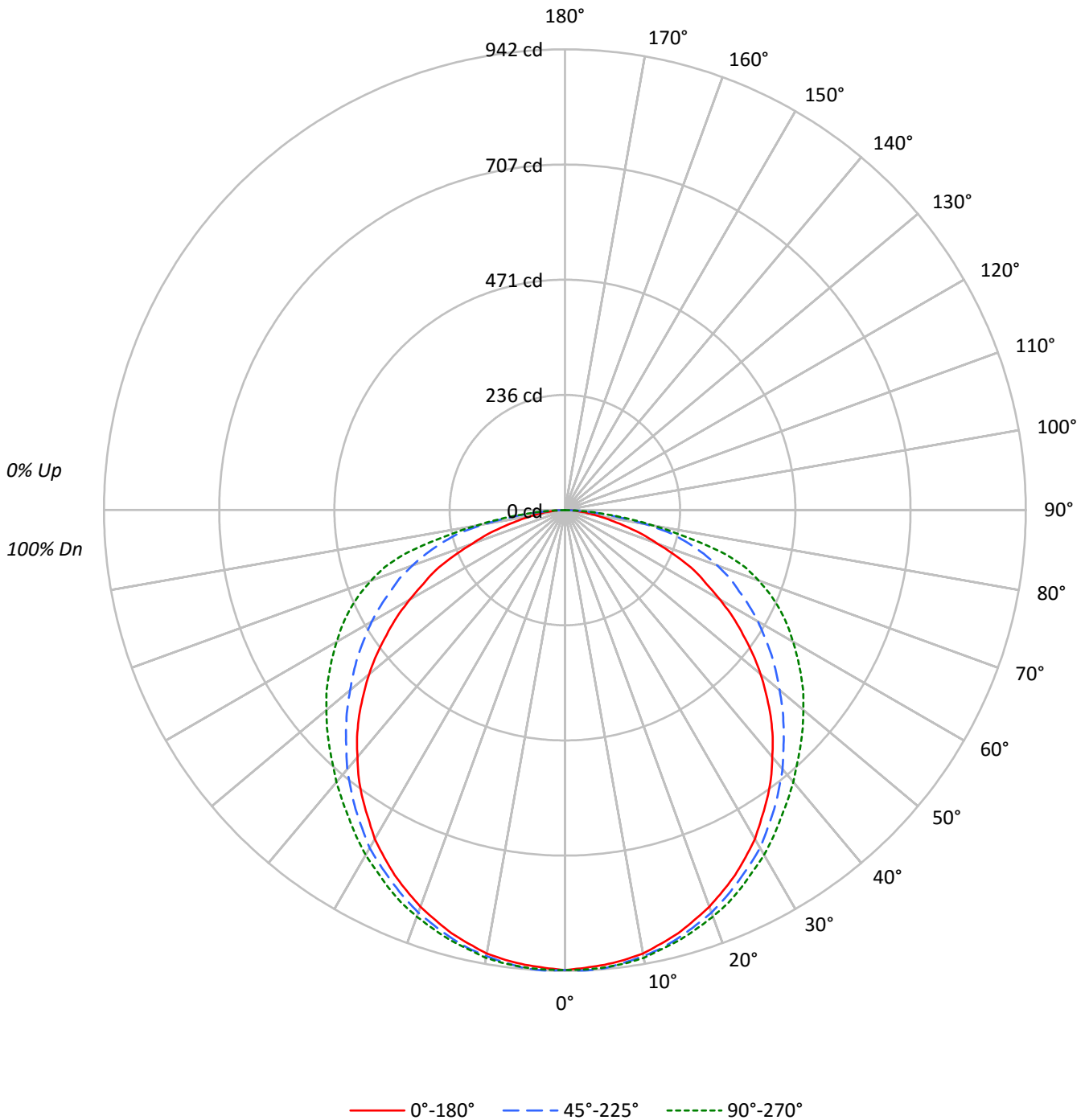
Input Watts (W): 32.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2531	2531	2531
5°	2521	2540	2535
10°	2516	2530	2540
15°	2495	2520	2535
20°	2471	2507	2533
25°	2445	2488	2530
30°	2413	2480	2530
35°	2368	2450	2527
40°	2316	2430	2551
45°	2262	2407	2592
50°	2187	2398	2663
55°	2088	2418	2764
60°	1968	2453	2899
65°	1859	2501	3097
70°	1588	2608	3317
75°	1330	2716	3447
80°	1089	2625	2876
85°	945	1948	2115



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.1	3.1
10°-20°	255.0	8.9
20°-30°	386.4	13.5
30°-40°	466.6	16.3
40°-50°	490.3	17.2
50°-60°	461.3	16.2
60°-70°	384.6	13.5
70°-80°	254.8	8.9
80°-90°	67.9	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°	730.5	25.6
0°-40°	1197.1	41.9
0°-60°	2148.6	75.2
0°-90°	2856.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2856.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	940	940	940	940	940	
5°	933	935	940	940	939	89
15°	895	899	904	908	910	252
25°	823	829	838	849	852	379
35°	721	728	746	762	769	451
45°	594	604	632	665	681	458
55°	445	465	515	568	589	398
65°	292	317	393	458	486	284
75°	128	178	261	315	332	139
85°	31	47	63	68	68	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	940.4	940.4	940.4	940.4	940.4
2.5°	936.8	938.6	942.3	942.3	940.4
5°	933.2	935.0	940.4	940.4	938.6
7.5°	927.8	929.6	933.2	936.8	935.0
10°	920.6	922.4	926.0	929.6	929.6
12.5°	908.0	909.8	917.0	918.8	918.8
15°	895.4	899.0	904.4	908.0	909.8
17.5°	879.2	882.8	890.0	897.2	897.2
20°	863.0	866.6	875.6	882.8	884.6
22.5°	843.2	848.6	857.6	866.6	870.2
25°	823.3	828.7	837.8	848.6	852.2
27.5°	799.9	805.3	817.9	830.5	832.4
30°	776.5	781.9	798.1	808.9	814.3
32.5°	747.7	754.9	771.1	787.3	792.7
35°	720.7	727.9	745.9	762.1	769.3
37.5°	691.8	699.0	718.8	738.7	747.7
40°	659.4	668.4	691.8	713.4	726.1
42.5°	628.8	637.8	661.2	690.0	702.6
45°	594.5	603.5	632.4	664.8	681.0
47.5°	558.5	569.3	603.5	643.2	659.4
50°	522.5	535.1	572.9	618.0	636.0
52.5°	484.6	500.9	544.1	592.7	614.4
55°	445.0	464.8	515.3	567.5	589.1
57.5°	407.2	425.2	484.6	540.5	563.9
60°	365.7	389.2	455.8	513.5	538.7
62.5°	326.1	351.3	425.2	486.4	513.5
65°	291.9	317.1	392.8	457.6	486.4
67.5°	246.8	281.1	365.7	427.0	455.8
70°	201.8	248.6	331.5	394.6	421.6
72.5°	167.6	212.6	297.3	360.3	385.5
75°	127.9	178.4	261.2	315.3	331.5
77.5°	95.5	147.7	223.4	250.4	252.2
80°	70.3	113.5	169.4	178.4	185.6
82.5°	48.6	79.3	109.9	120.7	124.3
85°	30.6	46.8	63.1	68.5	68.5
87.5°	16.2	18.0	21.6	21.6	21.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)