

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: P312518

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-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: P312518
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: 22FCZ2-34HE-UNV-L83050-HRP-CA08-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 4500K 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: 2641.0 lumens
Efficiency: N/A
Efficacy: 91.1 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

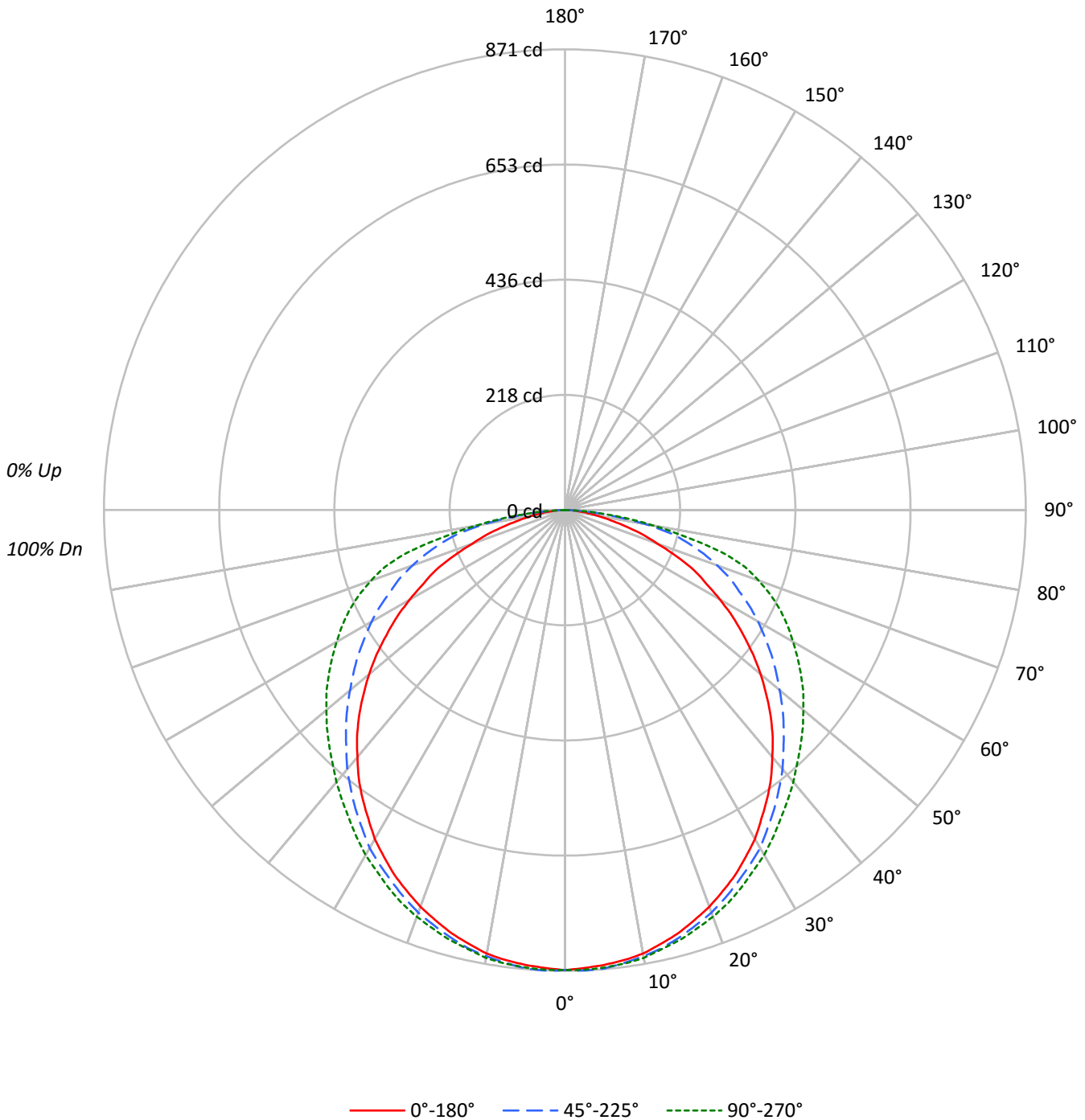
Input Watts (W): 29
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2340	2340	2340
5°	2331	2349	2345
10°	2326	2340	2349
15°	2307	2330	2344
20°	2285	2319	2342
25°	2261	2300	2340
30°	2231	2293	2340
35°	2189	2266	2337
40°	2142	2247	2359
45°	2092	2226	2396
50°	2022	2218	2462
55°	1931	2236	2556
60°	1820	2268	2681
65°	1719	2313	2864
70°	1468	2412	3067
75°	1230	2512	3187
80°	1007	2427	2659
85°	874	1800	1954



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.4	3.1
10°-20°	235.8	8.9
20°-30°	357.3	13.5
30°-40°	431.4	16.3
40°-50°	453.4	17.2
50°-60°	426.6	16.2
60°-70°	355.7	13.5
70°-80°	235.7	8.9
80°-90°	62.8	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°	675.5	25.6
0°-40°	1106.9	41.9
0°-60°	1986.9	75.2
0°-90°	2641.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2641.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	870	870	870	870	870	
5°	863	865	870	870	868	82
15°	828	831	836	840	841	233
25°	761	766	775	785	788	351
35°	666	673	690	705	711	417
45°	550	558	585	615	630	423
55°	412	430	476	525	545	368
65°	270	293	363	423	450	263
75°	118	165	242	292	306	128
85°	28	43	58	63	63	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	869.7	869.7	869.7	869.7	869.7
2.5°	866.3	868.0	871.3	871.3	869.7
5°	863.0	864.7	869.7	869.7	868.0
7.5°	858.0	859.7	863.0	866.3	864.7
10°	851.3	853.0	856.3	859.7	859.7
12.5°	839.7	841.3	848.0	849.7	849.7
15°	828.0	831.3	836.3	839.7	841.3
17.5°	813.0	816.3	823.0	829.7	829.7
20°	798.0	801.3	809.7	816.3	818.0
22.5°	779.7	784.7	793.0	801.3	804.7
25°	761.4	766.4	774.7	784.7	788.0
27.5°	739.7	744.7	756.4	768.0	769.7
30°	718.0	723.0	738.0	748.0	753.0
32.5°	691.4	698.1	713.0	728.0	733.0
35°	666.4	673.1	689.7	704.7	711.4
37.5°	639.7	646.4	664.7	683.1	691.4
40°	609.8	618.1	639.7	659.7	671.4
42.5°	581.4	589.8	611.4	638.1	649.7
45°	549.8	558.1	584.8	614.8	629.7
47.5°	516.5	526.5	558.1	594.8	609.8
50°	483.1	494.8	529.8	571.4	588.1
52.5°	448.2	463.1	503.1	548.1	568.1
55°	411.5	429.8	476.5	524.8	544.8
57.5°	376.5	393.2	448.2	499.8	521.5
60°	338.2	359.9	421.5	474.8	498.1
62.5°	301.5	324.9	393.2	449.8	474.8
65°	269.9	293.2	363.2	423.2	449.8
67.5°	228.2	259.9	338.2	394.8	421.5
70°	186.6	229.9	306.5	364.9	389.8
72.5°	154.9	196.6	274.9	333.2	356.5
75°	118.3	164.9	241.6	291.5	306.5
77.5°	88.3	136.6	206.6	231.6	233.2
80°	65.0	105.0	156.6	164.9	171.6
82.5°	45.0	73.3	101.6	111.6	115.0
85°	28.3	43.3	58.3	63.3	63.3
87.5°	15.0	16.7	20.0	20.0	20.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)