

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: P312820

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-CA125-W2A-U-3000K**

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: P312820
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
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-CA125-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.125" 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: 2914.0 lumens
Efficiency: N/A
Efficacy: 106.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

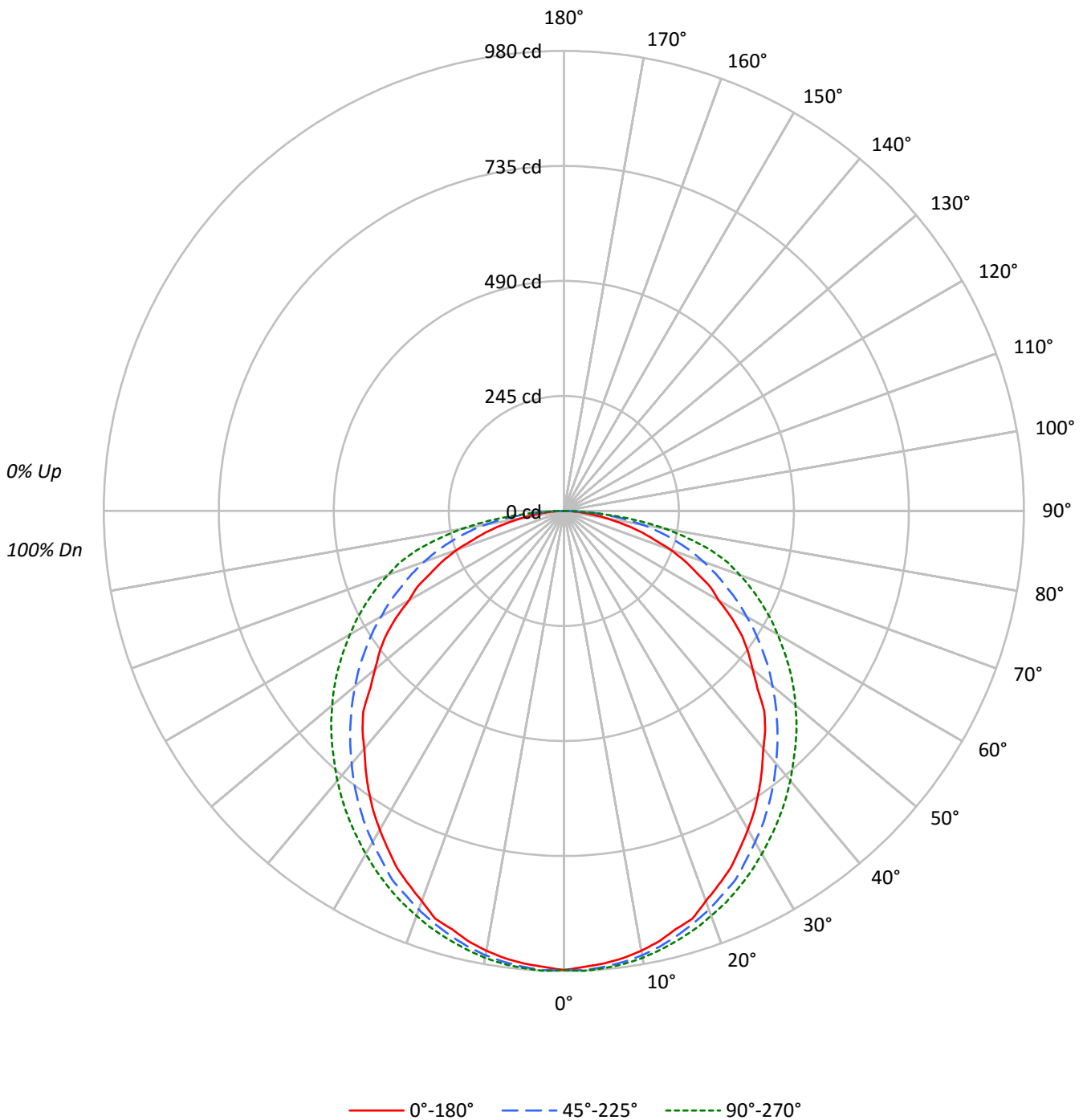
Input Watts (W): 27.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	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	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
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	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2631	2631	2631
5°	2615	2633	2641
10°	2599	2626	2641
15°	2568	2607	2634
20°	2532	2588	2628
25°	2493	2572	2625
30°	2435	2531	2622
35°	2382	2502	2625
40°	2322	2469	2636
45°	2298	2447	2659
50°	2195	2429	2697
55°	2172	2421	2755
60°	2049	2417	2830
65°	1989	2433	2957
70°	1910	2491	3139
75°	1740	2567	3379
80°	1491	2658	3415
85°	1207	2541	2927



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.5	3.2
10°-20°	263.9	9.1
20°-30°	397.2	13.6
30°-40°	476.7	16.4
40°-50°	498.3	17.1
50°-60°	464.3	15.9
60°-70°	380.9	13.1
70°-80°	256.6	8.8
80°-90°	83.6	2.9
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°	753.6	25.9
0°-40°	1230.3	42.2
0°-60°	2192.9	75.3
0°-90°	2914.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2914.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	978	978	978	978	978	
5°	968	971	975	976	978	92
15°	922	928	936	944	946	261
25°	840	845	866	879	884	386
35°	725	735	762	788	799	453
45°	604	608	643	682	699	461
55°	463	471	516	565	587	410
65°	312	326	382	438	464	311
75°	167	186	247	303	325	176
85°	39	56	82	96	95	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	977.7	977.7	977.7	977.7	977.7
2.5°	972.1	974.9	979.1	980.5	980.5
5°	967.9	970.7	974.9	976.3	977.7
7.5°	960.9	963.7	969.3	972.1	973.5
10°	951.2	954.0	960.9	965.1	966.5
12.5°	938.6	941.4	949.8	955.4	956.8
15°	921.9	927.5	935.8	944.2	945.6
17.5°	910.7	909.3	920.5	930.3	933.0
20°	884.2	891.2	903.8	914.9	917.7
22.5°	861.9	867.5	884.2	896.8	902.4
25°	839.6	845.2	866.1	878.6	884.2
27.5°	811.7	820.1	839.6	857.7	864.7
30°	783.8	792.2	814.5	835.4	843.8
32.5°	755.9	765.7	789.4	811.7	821.5
35°	725.2	735.0	761.5	788.0	799.2
37.5°	693.2	705.7	733.6	762.9	775.4
40°	661.1	673.6	702.9	736.4	750.3
42.5°	634.6	640.2	673.6	709.9	723.8
45°	603.9	608.1	642.9	682.0	698.7
47.5°	559.3	574.6	612.3	655.5	672.2
50°	524.4	541.1	580.2	626.2	644.3
52.5°	495.1	506.3	549.5	595.5	616.4
55°	463.0	471.4	516.0	564.8	587.2
57.5°	424.0	439.3	484.0	534.2	556.5
60°	380.7	400.3	449.1	503.5	525.8
62.5°	352.9	364.0	417.0	471.4	496.5
65°	312.4	326.4	382.1	437.9	464.4
67.5°	278.9	292.9	350.1	405.9	432.4
70°	242.7	256.6	316.6	372.4	398.9
72.5°	200.8	220.4	283.1	338.9	366.8
75°	167.4	185.5	246.9	302.6	325.0
77.5°	129.7	153.4	210.6	256.6	273.4
80°	96.2	119.9	171.5	205.0	220.4
82.5°	65.6	89.3	128.3	153.4	161.8
85°	39.1	55.8	82.3	96.2	94.8
87.5°	18.1	23.7	33.5	33.5	32.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)