

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: P309041

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-S-CP250-W2A-U-2700K**

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: P309041
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
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-L82765-S-CP250-W2A-U-2700K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB 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: 2780.0 lumens
Efficiency: N/A
Efficacy: 100.7 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

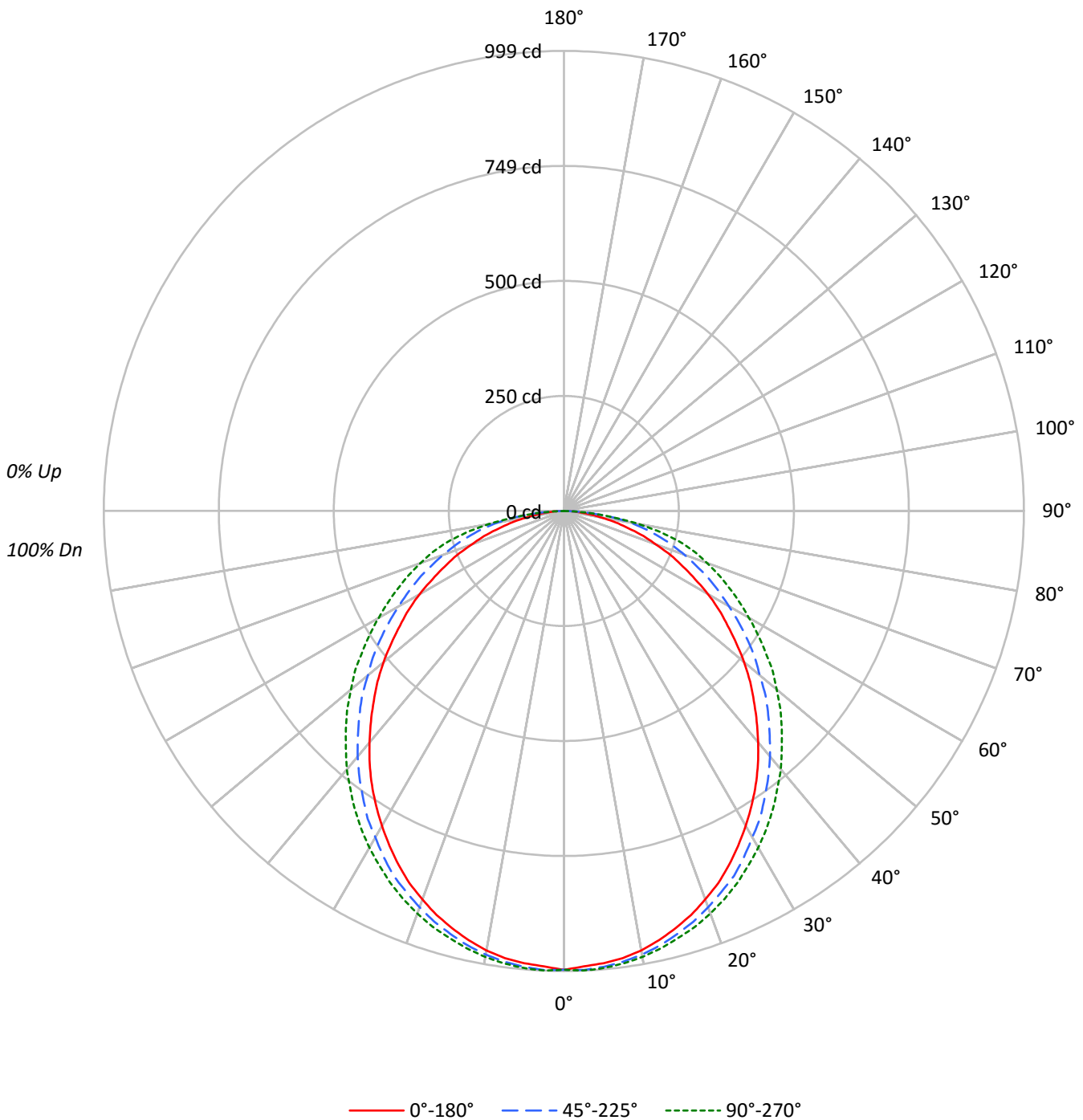
Input Watts (W): 27.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2681	2681	2681
5°	2663	2684	2691
10°	2648	2672	2687
15°	2613	2649	2674
20°	2570	2622	2663
25°	2519	2596	2646
30°	2454	2543	2624
35°	2386	2497	2599
40°	2305	2447	2575
45°	2221	2389	2547
50°	2140	2324	2525
55°	2038	2282	2507
60°	1948	2227	2499
65°	1817	2213	2527
70°	1674	2194	2603
75°	1511	2225	2738
80°	1306	2292	2572
85°	1081	1924	1924



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.2	3.4
10°-20°	268.1	9.6
20°-30°	401.1	14.4
30°-40°	475.0	17.1
40°-50°	484.1	17.4
50°-60°	433.9	15.6
60°-70°	339.7	12.2
70°-80°	219.1	7.9
80°-90°	64.7	2.3
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°	763.4	27.5
0°-40°	1238.5	44.5
0°-60°	2156.5	77.6
0°-90°	2780.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2780.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	996	996	996	996	996	
5°	986	988	994	995	996	94
15°	938	943	951	958	960	264
25°	848	856	874	886	891	390
35°	726	735	760	783	791	454
45°	584	597	628	660	669	451
55°	434	449	486	520	534	390
65°	285	302	348	381	397	283
75°	145	167	214	250	263	156
85°	35	48	62	62	62	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	996.2	996.2	996.2	996.2	996.2
2.5°	989.7	992.3	997.5	998.8	998.8
5°	985.8	988.4	993.6	994.9	996.2
7.5°	979.3	980.6	987.1	989.7	991.0
10°	968.9	971.5	978.0	981.9	983.2
12.5°	954.7	958.5	966.3	971.5	972.8
15°	937.8	943.0	950.8	958.5	959.8
17.5°	919.6	924.8	935.2	944.3	946.9
20°	897.6	904.1	915.7	926.1	930.0
22.5°	875.5	880.7	895.0	908.0	911.9
25°	848.3	856.1	874.2	885.9	891.1
27.5°	819.8	828.8	847.0	862.6	867.7
30°	789.9	799.0	818.5	837.9	844.4
32.5°	758.8	769.2	792.5	812.0	818.5
35°	726.4	735.4	760.1	783.4	791.2
37.5°	692.6	700.4	729.0	753.6	761.4
40°	656.3	666.7	696.5	725.1	732.9
42.5°	620.0	631.7	661.5	692.6	700.4
45°	583.7	596.7	627.8	660.2	669.3
47.5°	548.7	559.0	594.1	625.2	638.2
50°	511.1	521.4	555.2	590.2	603.1
52.5°	472.1	486.4	522.7	556.4	572.0
55°	434.5	448.8	486.4	520.1	534.4
57.5°	399.5	411.2	450.1	485.1	499.4
60°	361.9	372.3	413.8	451.4	464.4
62.5°	321.7	337.2	380.0	415.1	430.6
65°	285.4	302.2	347.6	381.3	396.9
67.5°	251.6	267.2	311.3	347.6	364.5
70°	212.7	233.5	278.9	315.2	330.8
72.5°	181.6	199.8	246.4	282.8	299.6
75°	145.3	167.3	214.0	250.3	263.3
77.5°	115.4	137.5	181.6	210.1	216.6
80°	84.3	106.4	147.9	162.1	166.0
82.5°	57.1	77.8	106.4	110.3	111.5
85°	35.0	48.0	62.3	62.3	62.3
87.5°	16.9	19.5	22.1	20.8	20.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)