

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: P308765

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-CP187-W2A-U-4000K**

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: P308765
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-L82765-CP187-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.187" 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: 2891.0 lumens
Efficiency: N/A
Efficacy: 103.6 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

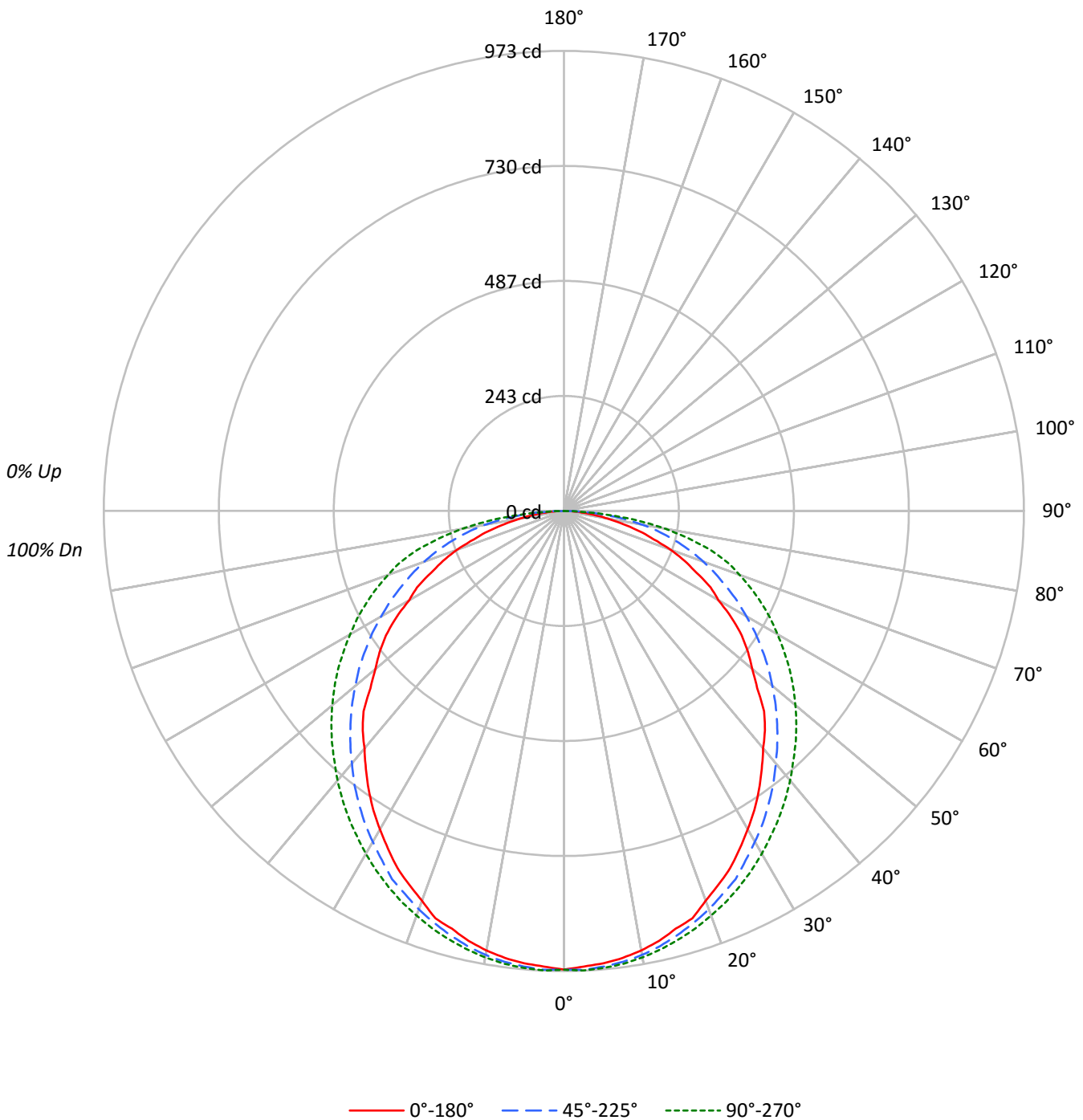
Input Watts (W): 27.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P308765

CATALOG NUMBER: 22FCZ2-34HE-UNV-L82765-CP187-W2A-U-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P308765

CATALOG NUMBER: 22FCZ2-34HE-UNV-L82765-CP187-W2A-U-4000K

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°	2610	2610	2610
5°	2594	2613	2620
10°	2579	2605	2620
15°	2548	2586	2613
20°	2512	2568	2607
25°	2473	2551	2605
30°	2416	2511	2601
35°	2364	2482	2604
40°	2304	2450	2615
45°	2280	2428	2638
50°	2178	2410	2676
55°	2155	2402	2733
60°	2033	2398	2807
65°	1973	2414	2934
70°	1895	2471	3113
75°	1726	2546	3352
80°	1480	2638	3388
85°	1195	2519	2905



TEST NUMBER: P308765

CATALOG NUMBER: 22FCZ2-34HE-UNV-L82765-CP187-W2A-U-4000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.8	3.2
10°-20°	261.8	9.1
20°-30°	394.1	13.6
30°-40°	473.0	16.4
40°-50°	494.3	17.1
50°-60°	460.7	15.9
60°-70°	377.8	13.1
70°-80°	254.6	8.8
80°-90°	82.9	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°	747.7	25.9
0°-40°	1220.6	42.2
0°-60°	2175.6	75.3
0°-90°	2891.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2891.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	970	970	970	970	970	
5°	960	963	967	969	970	91
15°	915	920	928	937	938	258
25°	833	838	859	872	877	383
35°	720	729	756	782	793	450
45°	599	603	638	677	693	458
55°	459	468	512	560	582	407
65°	310	324	379	434	461	308
75°	166	184	245	300	322	175
85°	39	55	82	96	94	46
90°	0	0	0	0	0	



TEST NUMBER: P308765

CATALOG NUMBER: 22FCZ2-34HE-UNV-L82765-CP187-W2A-U-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	970.0	970.0	970.0	970.0	970.0
2.5°	964.4	967.2	971.3	972.7	972.7
5°	960.3	963.0	967.2	968.6	970.0
7.5°	953.4	956.1	961.7	964.4	965.8
10°	943.7	946.4	953.4	957.5	958.9
12.5°	931.2	934.0	942.3	947.8	949.2
15°	914.6	920.1	928.4	936.7	938.1
17.5°	903.5	902.2	913.2	922.9	925.7
20°	877.2	884.2	896.6	907.7	910.5
22.5°	855.1	860.6	877.2	889.7	895.2
25°	833.0	838.5	859.3	871.7	877.2
27.5°	805.3	813.6	833.0	851.0	857.9
30°	777.6	785.9	808.1	828.8	837.1
32.5°	750.0	759.6	783.2	805.3	815.0
35°	719.5	729.2	755.5	781.8	792.8
37.5°	687.7	700.1	727.8	756.9	769.3
40°	655.9	668.3	697.4	730.6	744.4
42.5°	629.6	635.1	668.3	704.3	718.1
45°	599.1	603.3	637.9	676.6	693.2
47.5°	554.9	570.1	607.4	650.3	666.9
50°	520.3	536.9	575.6	621.3	639.3
52.5°	491.2	502.3	545.2	590.8	611.6
55°	459.4	467.7	512.0	560.4	582.5
57.5°	420.6	435.9	480.1	529.9	552.1
60°	377.7	397.1	445.5	499.5	521.6
62.5°	350.1	361.1	413.7	467.7	492.6
65°	309.9	323.8	379.1	434.5	460.8
67.5°	276.7	290.6	347.3	402.6	428.9
70°	240.8	254.6	314.1	369.4	395.7
72.5°	199.2	218.6	280.9	336.2	363.9
75°	166.0	184.0	244.9	300.3	322.4
77.5°	128.7	152.2	208.9	254.6	271.2
80°	95.5	119.0	170.2	203.4	218.6
82.5°	65.0	88.6	127.3	152.2	160.5
85°	38.7	55.3	81.6	95.5	94.1
87.5°	18.0	23.5	33.2	33.2	31.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)