

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: P312980

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-S-CP187-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: P312980  
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-L83050-S-CP187-W2A-U-3000K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH 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**

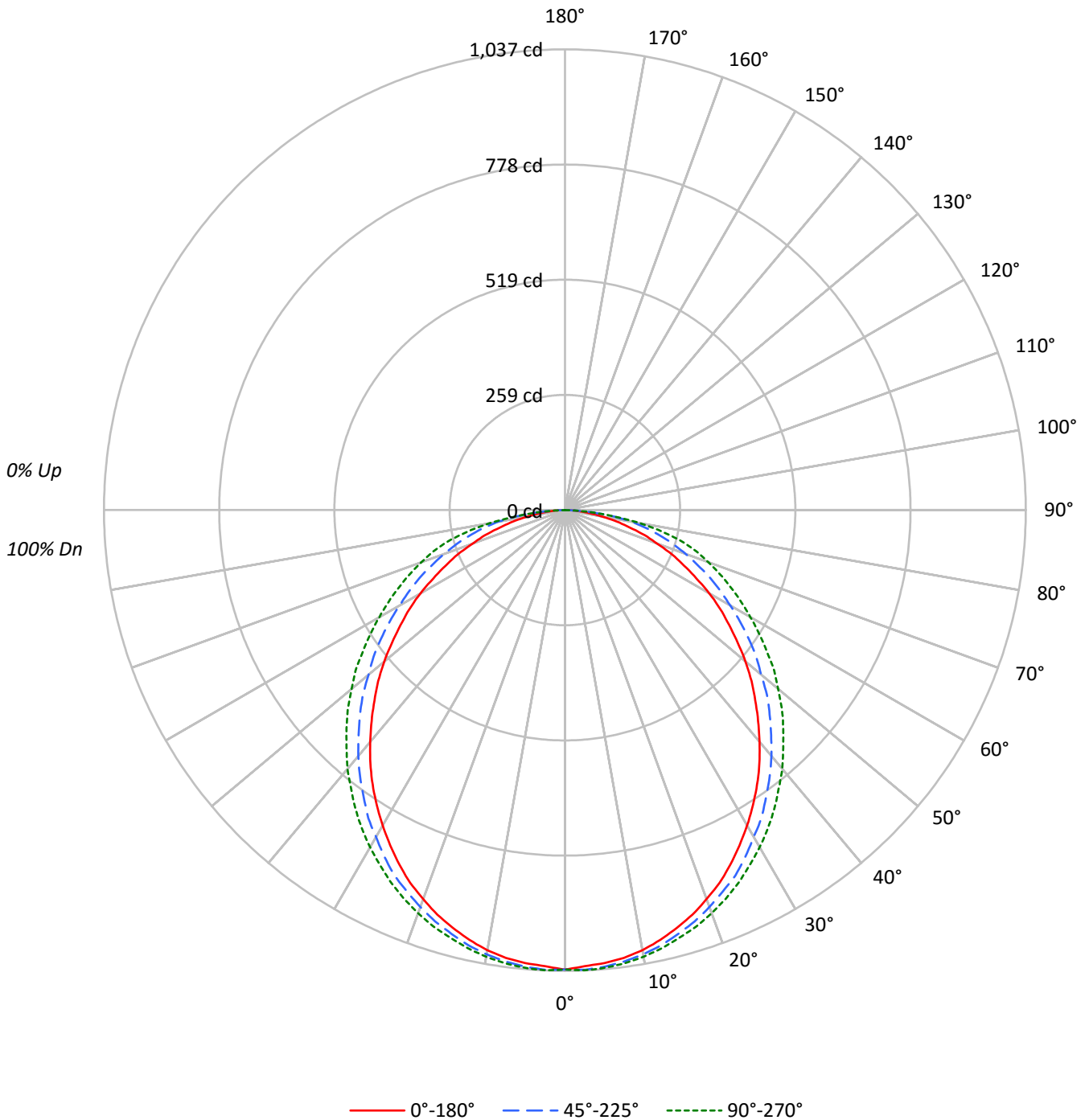
Lumens per Lamp: N/A  
Luminaire Lumens: 2886.0 lumens  
Efficiency: N/A  
Efficacy: 104.9 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 27.5  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: P312980

CATALOG NUMBER: 22FCZ2-34HE-UNV-L83050-S-CP187-W2A-U-3000K

### Luminous Intensity Polar Plot





TEST NUMBER: P312980

CATALOG NUMBER: 22FCZ2-34HE-UNV-L83050-S-CP187-W2A-U-3000K

**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°	2783	2783	2783
5°	2764	2786	2793
10°	2749	2774	2789
15°	2712	2750	2776
20°	2668	2723	2765
25°	2615	2695	2747
30°	2548	2640	2724
35°	2477	2592	2698
40°	2393	2540	2673
45°	2306	2480	2644
50°	2221	2413	2621
55°	2116	2369	2603
60°	2022	2312	2595
65°	1886	2298	2623
70°	1737	2278	2702
75°	1568	2310	2842
80°	1356	2379	2672
85°	1124	1995	1995



TEST NUMBER: P312980

CATALOG NUMBER: 22FCZ2-34HE-UNV-L83050-S-CP187-W2A-U-3000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	97.8	3.4
10°-20°	278.3	9.6
20°-30°	416.4	14.4
30°-40°	493.2	17.1
40°-50°	502.6	17.4
50°-60°	450.5	15.6
60°-70°	352.7	12.2
70°-80°	227.4	7.9
80°-90°	67.2	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°	792.5	27.5
0°-40°	1285.7	44.5
0°-60°	2238.7	77.6
0°-90°	2886.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2886.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1034	1034	1034	1034	1034	
5°	1023	1026	1032	1033	1034	97
15°	974	979	987	995	996	274
25°	881	889	908	920	925	405
35°	754	764	789	813	821	471
45°	606	619	652	685	695	468
55°	451	466	505	540	555	404
65°	296	314	361	396	412	294
75°	151	174	222	260	273	162
85°	36	50	65	65	65	43
90°	0	0	0	0	0	



TEST NUMBER: P312980

CATALOG NUMBER: 22FCZ2-34HE-UNV-L83050-S-CP187-W2A-U-3000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1034.1	1034.1	1034.1	1034.1	1034.1
2.5°	1027.4	1030.1	1035.5	1036.8	1036.8
5°	1023.4	1026.1	1031.5	1032.8	1034.1
7.5°	1016.6	1018.0	1024.7	1027.4	1028.8
10°	1005.9	1008.6	1015.3	1019.3	1020.7
12.5°	991.1	995.1	1003.2	1008.6	1009.9
15°	973.5	978.9	987.0	995.1	996.4
17.5°	954.7	960.1	970.9	980.3	983.0
20°	931.8	938.5	950.7	961.4	965.5
22.5°	908.9	914.3	929.1	942.6	946.6
25°	880.6	888.7	907.6	919.7	925.1
27.5°	851.0	860.4	879.3	895.5	900.8
30°	820.0	829.5	849.7	869.9	876.6
32.5°	787.7	798.5	822.7	842.9	849.7
35°	754.1	763.5	789.1	813.3	821.4
37.5°	719.1	727.1	756.8	782.3	790.4
40°	681.3	692.1	723.1	752.7	760.8
42.5°	643.6	655.8	686.7	719.1	727.1
45°	605.9	619.4	651.7	685.4	694.8
47.5°	569.6	580.4	616.7	649.0	662.5
50°	530.5	541.3	576.3	612.7	626.1
52.5°	490.1	505.0	542.7	577.7	593.8
55°	451.1	465.9	505.0	540.0	554.8
57.5°	414.7	426.9	467.2	503.6	518.4
60°	375.7	386.5	429.5	468.6	482.1
62.5°	333.9	350.1	394.5	430.9	447.1
65°	296.2	313.7	360.9	395.9	412.0
67.5°	261.2	277.4	323.2	360.9	378.4
70°	220.8	242.4	289.5	327.2	343.4
72.5°	188.5	207.4	255.8	293.5	311.1
75°	150.8	173.7	222.2	259.9	273.3
77.5°	119.8	142.7	188.5	218.1	224.9
80°	87.5	110.4	153.5	168.3	172.4
82.5°	59.2	80.8	110.4	114.5	115.8
85°	36.4	49.8	64.6	64.6	64.6
87.5°	17.5	20.2	22.9	21.5	21.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)