

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: P312966

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-S-CA08-W2A-U-3500K**

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: P312966
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-CA08-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 3500K 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: 3264.0 lumens
Efficiency: N/A
Efficacy: 118.3 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

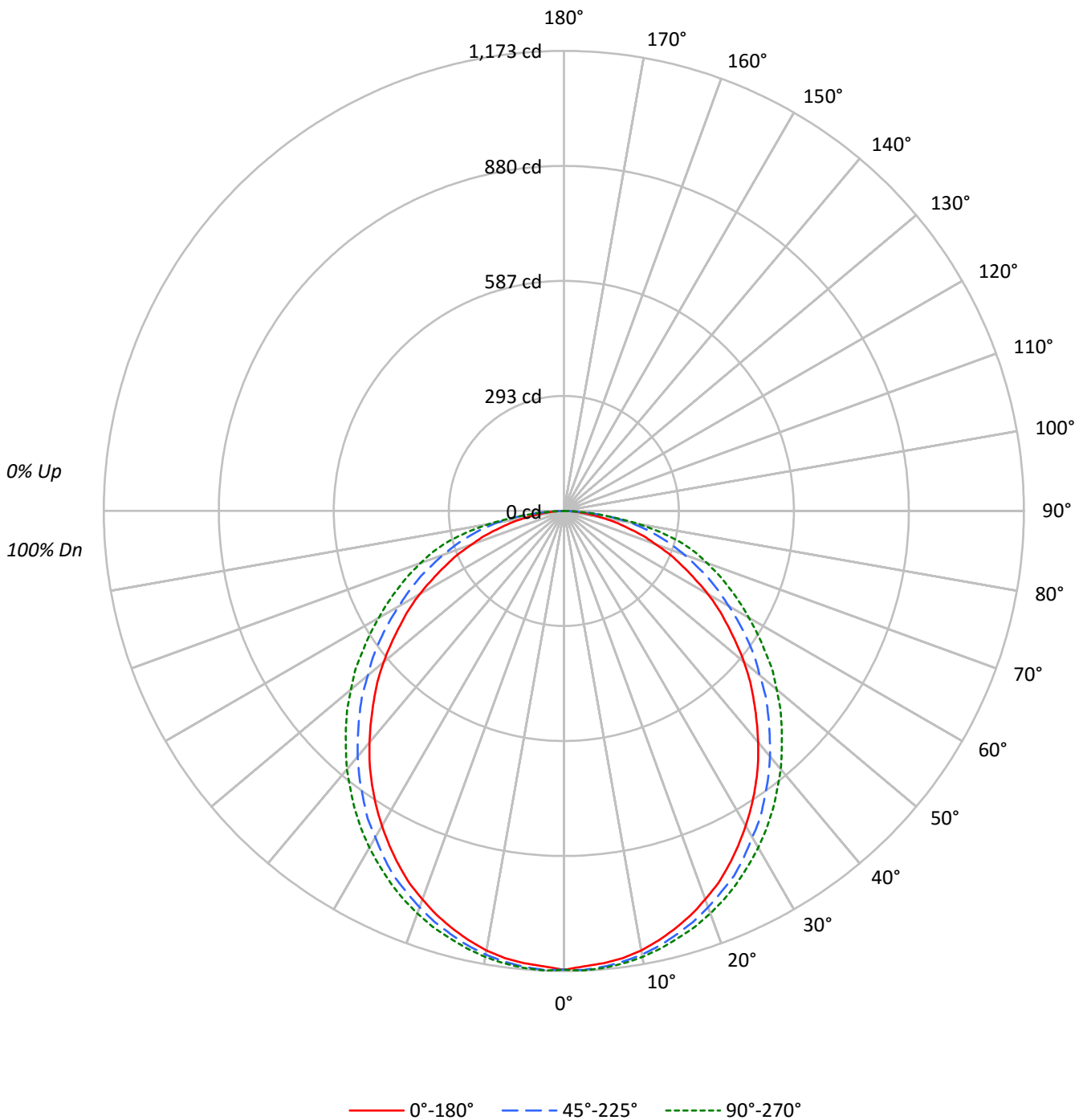
Input Watts (W): 27.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P312966

CATALOG NUMBER: 22FCZ2-34HE-UNV-L83050-S-CA08-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P312966

CATALOG NUMBER: 22FCZ2-34HE-UNV-L83050-S-CA08-W2A-U-3500K

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°	3147	3147	3147
5°	3126	3151	3159
10°	3108	3138	3154
15°	3068	3110	3140
20°	3018	3079	3127
25°	2957	3048	3106
30°	2882	2986	3081
35°	2802	2932	3052
40°	2707	2873	3022
45°	2608	2805	2990
50°	2512	2729	2965
55°	2394	2679	2943
60°	2287	2615	2934
65°	2133	2599	2967
70°	1965	2576	3055
75°	1774	2613	3215
80°	1534	2690	3020
85°	1269	2257	2257



TEST NUMBER: P312966

CATALOG NUMBER: 22FCZ2-34HE-UNV-L83050-S-CA08-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.6	3.4
10°-20°	314.8	9.6
20°-30°	471.0	14.4
30°-40°	557.7	17.1
40°-50°	568.4	17.4
50°-60°	509.5	15.6
60°-70°	398.8	12.2
70°-80°	257.2	7.9
80°-90°	76.0	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°	896.3	27.5
0°-40°	1454.1	44.5
0°-60°	2532.0	77.6
0°-90°	3264.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3264.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1170	1170	1170	1170	1170	
5°	1157	1160	1166	1168	1170	110
15°	1101	1107	1116	1125	1127	310
25°	996	1005	1026	1040	1046	458
35°	853	864	892	920	929	533
45°	685	700	737	775	786	529
55°	510	527	571	611	627	457
65°	335	355	408	448	466	333
75°	171	196	251	294	309	183
85°	41	56	73	73	73	48
90°	0	0	0	0	0	



TEST NUMBER: P312966

CATALOG NUMBER: 22FCZ2-34HE-UNV-L83050-S-CA08-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1169.6	1169.6	1169.6	1169.6	1169.6
2.5°	1162.0	1165.0	1171.1	1172.6	1172.6
5°	1157.4	1160.5	1166.5	1168.1	1169.6
7.5°	1149.8	1151.3	1158.9	1162.0	1163.5
10°	1137.6	1140.7	1148.3	1152.8	1154.4
12.5°	1120.9	1125.4	1134.6	1140.7	1142.2
15°	1101.1	1107.2	1116.3	1125.4	1127.0
17.5°	1079.7	1085.8	1098.0	1108.7	1111.7
20°	1053.9	1061.5	1075.2	1087.4	1091.9
22.5°	1028.0	1034.1	1050.8	1066.0	1070.6
25°	996.0	1005.1	1026.4	1040.1	1046.2
27.5°	962.5	973.1	994.5	1012.7	1018.8
30°	927.5	938.1	961.0	983.8	991.4
32.5°	890.9	903.1	930.5	953.3	961.0
35°	852.8	863.5	892.4	919.8	929.0
37.5°	813.2	822.4	855.9	884.8	893.9
40°	770.6	782.8	817.8	851.3	860.4
42.5°	727.9	741.7	776.7	813.2	822.4
45°	685.3	700.5	737.1	775.2	785.8
47.5°	644.2	656.4	697.5	734.0	749.3
50°	600.0	612.2	651.8	692.9	708.2
52.5°	554.3	571.1	613.7	653.3	671.6
55°	510.2	526.9	571.1	610.7	627.4
57.5°	469.1	482.8	528.4	569.6	586.3
60°	424.9	437.1	485.8	530.0	545.2
62.5°	377.7	396.0	446.2	487.3	505.6
65°	335.0	354.8	408.1	447.7	466.0
67.5°	295.4	313.7	365.5	408.1	427.9
70°	249.8	274.1	327.4	370.1	388.3
72.5°	213.2	234.5	289.4	332.0	351.8
75°	170.6	196.5	251.3	293.9	309.2
77.5°	135.5	161.4	213.2	246.7	254.3
80°	99.0	124.9	173.6	190.4	194.9
82.5°	67.0	91.4	124.9	129.4	131.0
85°	41.1	56.3	73.1	73.1	73.1
87.5°	19.8	22.8	25.9	24.4	24.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)