

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: P312967

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-S-CA08-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: P312967
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-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 4000K 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: 3427.0 lumens
Efficiency: N/A
Efficacy: 121.5 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

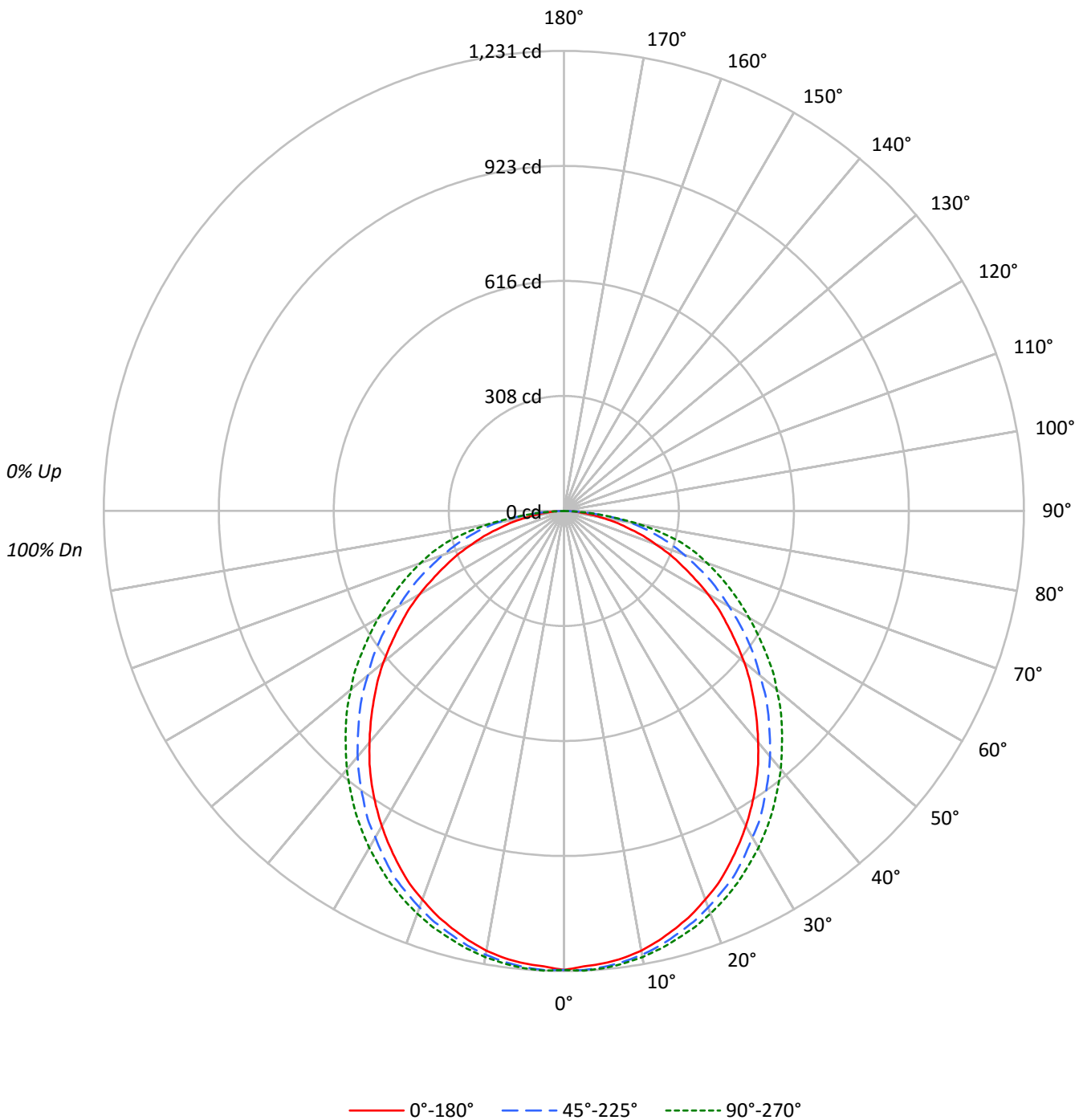
Input Watts (W): 28.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P312967

CATALOG NUMBER: 22FCZ2-34HE-UNV-L83050-S-CA08-W2A-U-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P312967

CATALOG NUMBER: 22FCZ2-34HE-UNV-L83050-S-CA08-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	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°	3305	3305	3305
5°	3283	3309	3317
10°	3264	3294	3312
15°	3221	3265	3296
20°	3169	3233	3283
25°	3105	3200	3262
30°	3026	3135	3234
35°	2941	3078	3204
40°	2842	3016	3173
45°	2738	2945	3140
50°	2637	2865	3113
55°	2513	2813	3091
60°	2401	2745	3081
65°	2240	2728	3116
70°	2063	2705	3208
75°	1862	2743	3375
80°	1610	2825	3172
85°	1334	2371	2371



TEST NUMBER: P312967

CATALOG NUMBER: 22FCZ2-34HE-UNV-L83050-S-CA08-W2A-U-4000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.1	3.4
10°-20°	330.5	9.6
20°-30°	494.5	14.4
30°-40°	585.6	17.1
40°-50°	596.8	17.4
50°-60°	534.9	15.6
60°-70°	418.8	12.2
70°-80°	270.0	7.9
80°-90°	79.8	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°	941.1	27.5
0°-40°	1526.7	44.5
0°-60°	2658.4	77.6
0°-90°	3427.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3427.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1228	1228	1228	1228	1228	
5°	1215	1218	1225	1226	1228	115
15°	1156	1162	1172	1182	1183	326
25°	1046	1055	1078	1092	1098	481
35°	895	907	937	966	975	560
45°	720	736	774	814	825	556
55°	536	553	600	641	659	480
65°	352	373	428	470	489	349
75°	179	206	264	309	325	192
85°	43	59	77	77	77	51
90°	0	0	0	0	0	



TEST NUMBER: P312967

CATALOG NUMBER: 22FCZ2-34HE-UNV-L83050-S-CA08-W2A-U-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1228.0	1228.0	1228.0	1228.0	1228.0
2.5°	1220.0	1223.2	1229.6	1231.2	1231.2
5°	1215.2	1218.4	1224.8	1226.4	1228.0
7.5°	1207.2	1208.8	1216.8	1220.0	1221.6
10°	1194.4	1197.6	1205.6	1210.4	1212.0
12.5°	1176.8	1181.6	1191.2	1197.6	1199.2
15°	1156.0	1162.4	1172.0	1181.6	1183.2
17.5°	1133.7	1140.1	1152.8	1164.0	1167.2
20°	1106.5	1114.5	1128.9	1141.7	1146.5
22.5°	1079.3	1085.7	1103.3	1119.3	1124.1
25°	1045.7	1055.3	1077.7	1092.1	1098.5
27.5°	1010.5	1021.7	1044.1	1063.3	1069.7
30°	973.8	985.0	1008.9	1032.9	1040.9
32.5°	935.4	948.2	977.0	1000.9	1008.9
35°	895.4	906.6	937.0	965.8	975.4
37.5°	853.8	863.4	898.6	929.0	938.6
40°	809.1	821.9	858.6	893.8	903.4
42.5°	764.3	778.7	815.5	853.8	863.4
45°	719.5	735.5	773.9	813.9	825.1
47.5°	676.4	689.2	732.3	770.7	786.7
50°	630.0	642.8	684.4	727.5	743.5
52.5°	582.0	599.6	644.4	686.0	705.1
55°	535.7	553.2	599.6	641.2	658.8
57.5°	492.5	506.9	554.8	598.0	615.6
60°	446.1	458.9	510.1	556.4	572.4
62.5°	396.5	415.7	468.5	511.7	530.9
65°	351.8	372.6	428.5	470.1	489.3
67.5°	310.2	329.4	383.8	428.5	449.3
70°	262.2	287.8	343.8	388.5	407.7
72.5°	223.9	246.2	303.8	348.6	369.4
75°	179.1	206.3	263.8	308.6	324.6
77.5°	142.3	169.5	223.9	259.0	267.0
80°	103.9	131.1	182.3	199.9	204.7
82.5°	70.4	95.9	131.1	135.9	137.5
85°	43.2	59.2	76.8	76.8	76.8
87.5°	20.8	24.0	27.2	25.6	25.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)