

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: P312987

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-S-CP250-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: P312987
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-CP250-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB 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: 3181.0 lumens
Efficiency: N/A
Efficacy: 112.8 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

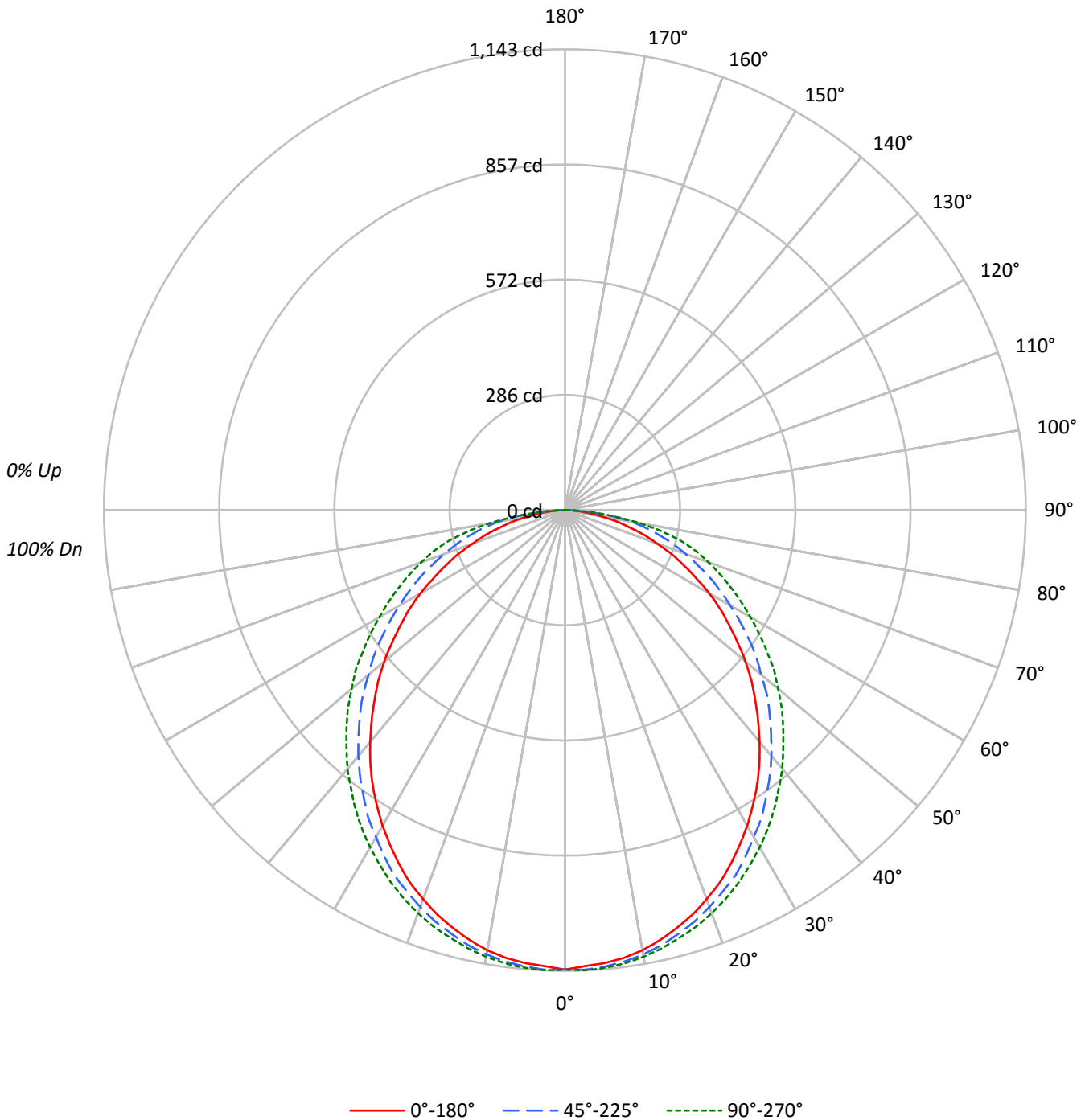
Input Watts (W): 28.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3067	3067	3067
5°	3047	3071	3079
10°	3030	3058	3074
15°	2990	3031	3060
20°	2941	3001	3048
25°	2882	2970	3027
30°	2809	2910	3002
35°	2730	2857	2974
40°	2638	2800	2946
45°	2542	2734	2914
50°	2448	2659	2889
55°	2333	2611	2869
60°	2229	2548	2859
65°	2079	2533	2892
70°	1915	2511	2978
75°	1728	2546	3133
80°	1495	2622	2944
85°	1238	2198	2198



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.8	3.4
10°-20°	306.8	9.6
20°-30°	459.0	14.4
30°-40°	543.6	17.1
40°-50°	554.0	17.4
50°-60°	496.5	15.6
60°-70°	388.7	12.2
70°-80°	250.7	7.9
80°-90°	74.0	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°	873.6	27.5
0°-40°	1417.1	44.5
0°-60°	2467.6	77.6
0°-90°	3181.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3181.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1140	1140	1140	1140	1140	
5°	1128	1131	1137	1138	1140	107
15°	1073	1079	1088	1097	1098	303
25°	971	980	1000	1014	1020	447
35°	831	842	870	896	905	519
45°	668	683	718	755	766	516
55°	497	514	557	595	612	446
65°	326	346	398	436	454	324
75°	166	192	245	286	301	178
85°	40	55	71	71	71	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1139.9	1139.9	1139.9	1139.9	1139.9
2.5°	1132.4	1135.4	1141.3	1142.8	1142.8
5°	1128.0	1130.9	1136.9	1138.4	1139.9
7.5°	1120.6	1122.0	1129.5	1132.4	1133.9
10°	1108.7	1111.7	1119.1	1123.5	1125.0
12.5°	1092.4	1096.8	1105.7	1111.7	1113.1
15°	1073.1	1079.0	1087.9	1096.8	1098.3
17.5°	1052.3	1058.2	1070.1	1080.5	1083.5
20°	1027.1	1034.5	1047.8	1059.7	1064.2
22.5°	1001.8	1007.8	1024.1	1038.9	1043.4
25°	970.7	979.6	1000.3	1013.7	1019.6
27.5°	938.0	948.4	969.2	987.0	992.9
30°	903.9	914.3	936.5	958.8	966.2
32.5°	868.2	880.1	906.8	929.1	936.5
35°	831.1	841.5	869.7	896.4	905.4
37.5°	792.6	801.5	834.1	862.3	871.2
40°	751.0	762.9	797.0	829.7	838.6
42.5°	709.4	722.8	756.9	792.6	801.5
45°	667.9	682.7	718.3	755.4	765.8
47.5°	627.8	639.7	679.8	715.4	730.2
50°	584.8	596.6	635.2	675.3	690.1
52.5°	540.2	556.6	598.1	636.7	654.5
55°	497.2	513.5	556.6	595.2	611.5
57.5°	457.1	470.5	515.0	555.1	571.4
60°	414.1	426.0	473.5	516.5	531.3
62.5°	368.1	385.9	434.9	474.9	492.7
65°	326.5	345.8	397.8	436.3	454.2
67.5°	287.9	305.7	356.2	397.8	417.1
70°	243.4	267.2	319.1	360.7	378.5
72.5°	207.8	228.6	282.0	323.6	342.8
75°	166.2	191.5	244.9	286.4	301.3
77.5°	132.1	157.3	207.8	240.4	247.9
80°	96.5	121.7	169.2	185.5	190.0
82.5°	65.3	89.1	121.7	126.2	127.6
85°	40.1	54.9	71.2	71.2	71.2
87.5°	19.3	22.3	25.2	23.7	23.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)