

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: P309034

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-S-CP187-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: P309034
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-L82765-S-CP187-W2A-U-3500K
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: 2983.0 lumens
Efficiency: N/A
Efficacy: 107.7 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

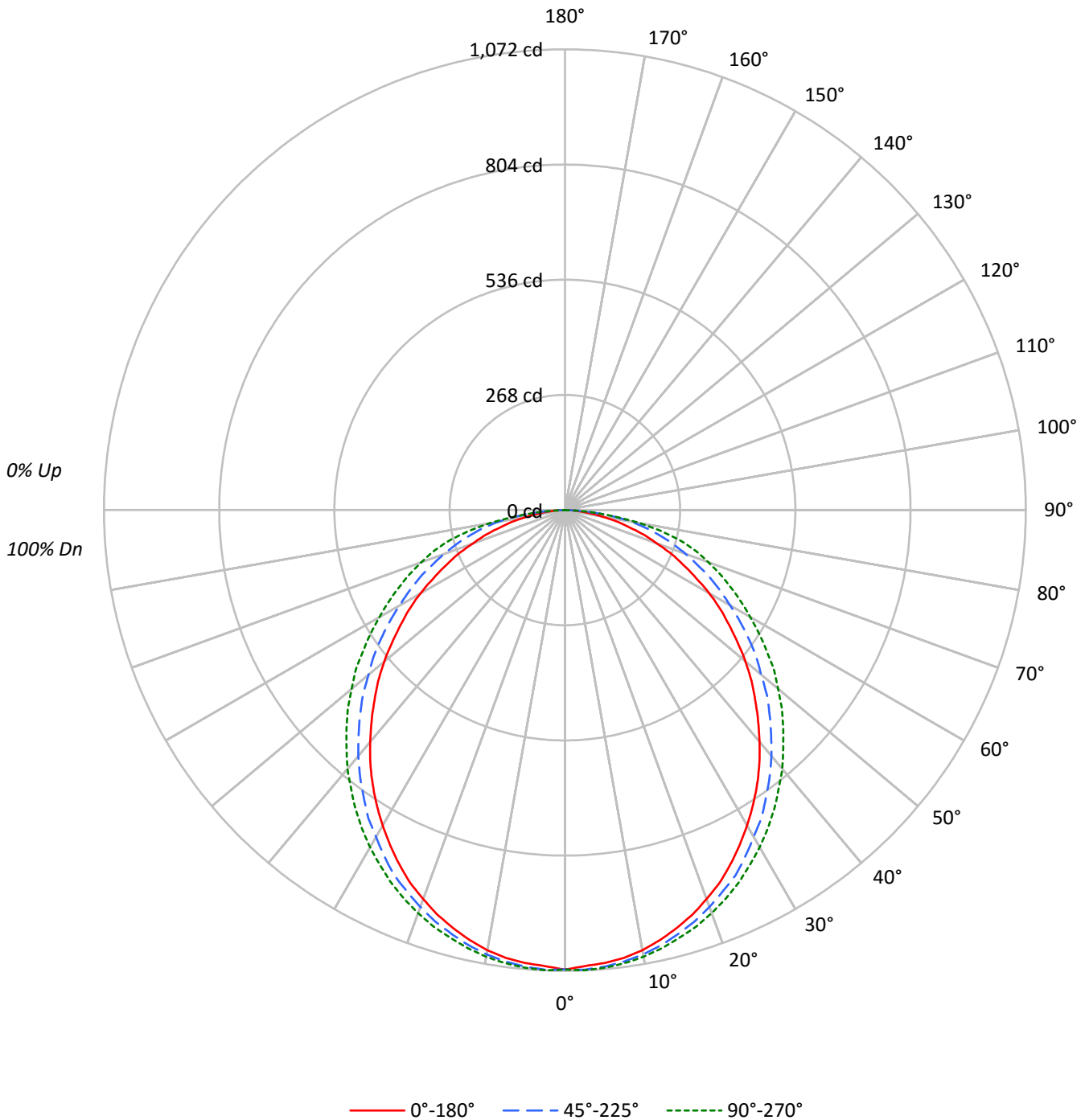
Input Watts (W): 27.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2876	2876	2876
5°	2857	2880	2887
10°	2841	2867	2883
15°	2803	2842	2869
20°	2758	2814	2858
25°	2703	2785	2839
30°	2634	2729	2816
35°	2560	2679	2789
40°	2474	2625	2762
45°	2383	2563	2733
50°	2296	2494	2709
55°	2188	2449	2690
60°	2090	2390	2682
65°	1950	2375	2712
70°	1796	2354	2792
75°	1621	2387	2937
80°	1402	2459	2762
85°	1161	2062	2062



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.1	3.4
10°-20°	287.7	9.6
20°-30°	430.4	14.4
30°-40°	509.7	17.1
40°-50°	519.5	17.4
50°-60°	465.6	15.6
60°-70°	364.5	12.2
70°-80°	235.0	7.9
80°-90°	69.4	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°	819.2	27.5
0°-40°	1328.9	44.5
0°-60°	2314.0	77.6
0°-90°	2983.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2983.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1069	1069	1069	1069	1069	
5°	1058	1061	1066	1068	1069	100
15°	1006	1012	1020	1028	1030	284
25°	910	919	938	951	956	419
35°	779	789	816	841	849	487
45°	626	640	674	708	718	484
55°	466	482	522	558	573	418
65°	306	324	373	409	426	304
75°	156	180	230	269	282	167
85°	38	52	67	67	67	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1068.9	1068.9	1068.9	1068.9	1068.9
2.5°	1061.9	1064.7	1070.3	1071.7	1071.7
5°	1057.8	1060.6	1066.1	1067.5	1068.9
7.5°	1050.8	1052.2	1059.2	1061.9	1063.3
10°	1039.7	1042.5	1049.4	1053.6	1055.0
12.5°	1024.4	1028.5	1036.9	1042.5	1043.8
15°	1006.3	1011.8	1020.2	1028.5	1029.9
17.5°	986.8	992.4	1003.5	1013.2	1016.0
20°	963.1	970.1	982.6	993.7	997.9
22.5°	939.5	945.0	960.3	974.3	978.4
25°	910.2	918.6	938.1	950.6	956.2
27.5°	879.6	889.4	908.8	925.5	931.1
30°	847.6	857.3	878.2	899.1	906.1
32.5°	814.2	825.3	850.4	871.3	878.2
35°	779.4	789.2	815.6	840.6	849.0
37.5°	743.2	751.6	782.2	808.6	817.0
40°	704.3	715.4	747.4	778.0	786.4
42.5°	665.3	677.8	709.8	743.2	751.6
45°	626.3	640.2	673.6	708.4	718.2
47.5°	588.7	599.9	637.4	670.8	684.8
50°	548.4	559.5	595.7	633.3	647.2
52.5°	506.6	521.9	560.9	597.1	613.8
55°	466.3	481.6	521.9	558.1	573.4
57.5°	428.7	441.2	483.0	520.5	535.8
60°	388.3	399.4	444.0	484.3	498.3
62.5°	345.2	361.9	407.8	445.4	462.1
65°	306.2	324.3	373.0	409.2	425.9
67.5°	270.0	286.7	334.0	373.0	391.1
70°	228.3	250.5	299.2	338.2	354.9
72.5°	194.9	214.3	264.4	303.4	321.5
75°	155.9	179.5	229.6	268.6	282.5
77.5°	123.9	147.5	194.9	225.5	232.4
80°	90.5	114.1	158.7	174.0	178.2
82.5°	61.2	83.5	114.1	118.3	119.7
85°	37.6	51.5	66.8	66.8	66.8
87.5°	18.1	20.9	23.7	22.3	22.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)