

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: P309027

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-S-CP125-W2A-U-4500K**

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: P309027
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-CP125-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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: 3239.0 lumens
Efficiency: N/A
Efficacy: 115.3 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

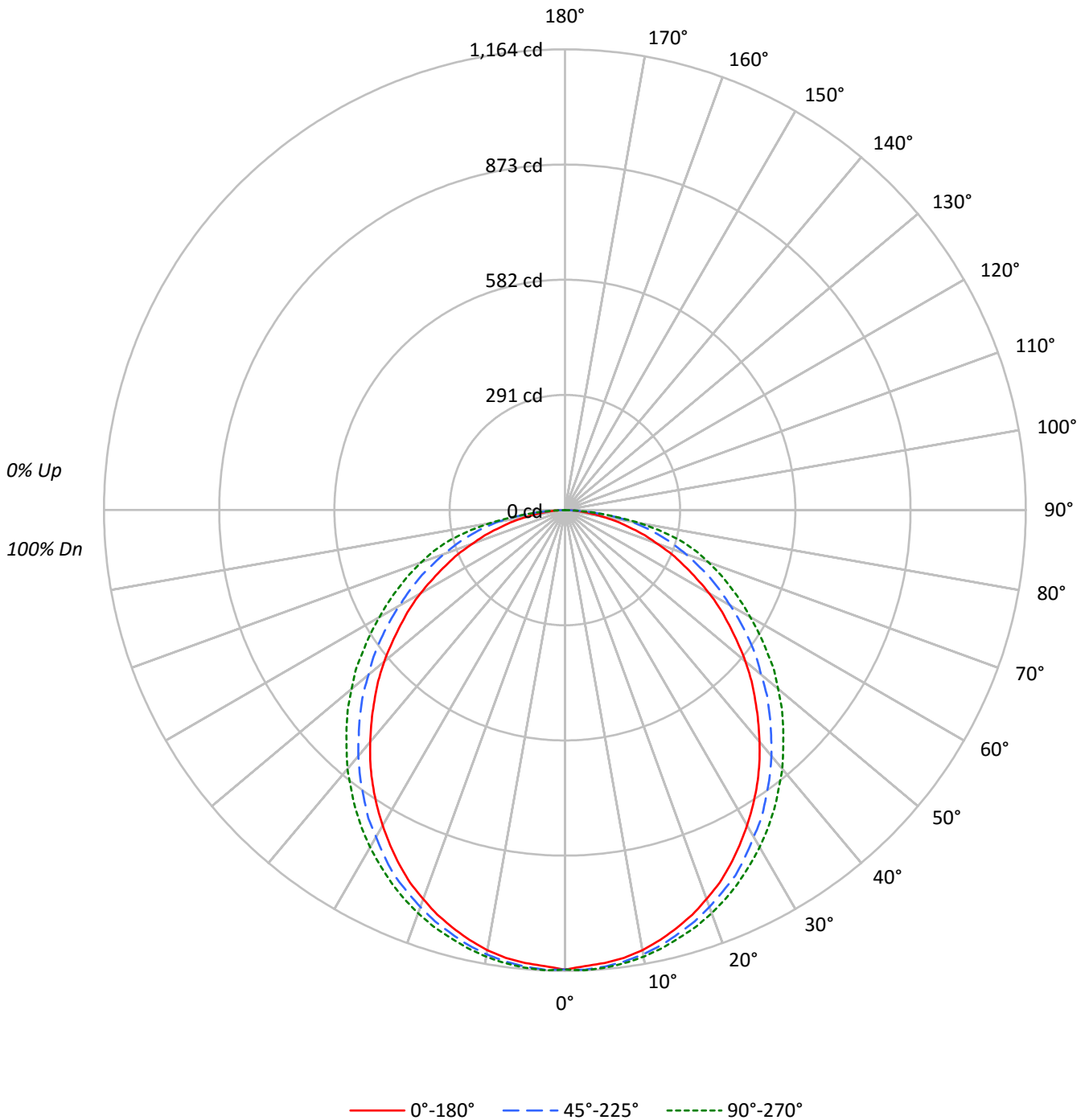
Input Watts (W): 28.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3123	3123	3123
5°	3102	3127	3135
10°	3085	3114	3130
15°	3044	3086	3115
20°	2995	3055	3103
25°	2935	3024	3083
30°	2860	2963	3057
35°	2780	2909	3029
40°	2686	2851	3000
45°	2588	2783	2968
50°	2493	2708	2942
55°	2375	2659	2921
60°	2269	2595	2912
65°	2117	2579	2944
70°	1950	2556	3032
75°	1760	2593	3190
80°	1522	2670	2997
85°	1260	2238	2238



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.8	3.4
10°-20°	312.4	9.6
20°-30°	467.4	14.4
30°-40°	553.5	17.1
40°-50°	564.1	17.4
50°-60°	505.5	15.6
60°-70°	395.8	12.2
70°-80°	255.2	7.9
80°-90°	75.4	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°	889.5	27.5
0°-40°	1443.0	44.5
0°-60°	2512.6	77.6
0°-90°	3239.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3239.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1161	1161	1161	1161	1161	
5°	1148	1152	1158	1159	1161	109
15°	1093	1099	1108	1117	1118	308
25°	988	997	1019	1032	1038	455
35°	846	857	886	913	922	529
45°	680	695	731	769	780	525
55°	506	523	567	606	623	454
65°	332	352	405	444	462	330
75°	169	195	249	292	307	181
85°	41	56	72	72	72	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1160.6	1160.6	1160.6	1160.6	1160.6
2.5°	1153.1	1156.1	1162.1	1163.7	1163.7
5°	1148.5	1151.6	1157.6	1159.1	1160.6
7.5°	1141.0	1142.5	1150.1	1153.1	1154.6
10°	1128.9	1131.9	1139.5	1144.0	1145.5
12.5°	1112.3	1116.8	1125.9	1131.9	1133.4
15°	1092.6	1098.7	1107.7	1116.8	1118.3
17.5°	1071.5	1077.5	1089.6	1100.2	1103.2
20°	1045.8	1053.3	1066.9	1079.0	1083.6
22.5°	1020.1	1026.1	1042.8	1057.9	1062.4
25°	988.4	997.4	1018.6	1032.2	1038.2
27.5°	955.1	965.7	986.8	1005.0	1011.0
30°	920.3	930.9	953.6	976.3	983.8
32.5°	884.1	896.2	923.4	946.0	953.6
35°	846.3	856.9	885.6	912.8	921.9
37.5°	807.0	816.1	849.3	878.0	887.1
40°	764.7	776.8	811.5	844.8	853.9
42.5°	722.4	736.0	770.7	807.0	816.1
45°	680.1	695.2	731.4	769.2	779.8
47.5°	639.3	651.3	692.1	728.4	743.5
50°	595.4	607.5	646.8	687.6	702.7
52.5°	550.1	566.7	609.0	648.3	666.5
55°	506.3	522.9	566.7	606.0	622.6
57.5°	465.5	479.1	524.4	565.2	581.8
60°	421.6	433.7	482.1	525.9	541.0
62.5°	374.8	392.9	442.8	483.6	501.7
65°	332.5	352.1	405.0	444.3	462.4
67.5°	293.2	311.3	362.7	405.0	424.7
70°	247.8	272.0	324.9	367.2	385.4
72.5°	211.6	232.7	287.1	329.5	349.1
75°	169.3	195.0	249.4	291.7	306.8
77.5°	134.5	160.2	211.6	244.8	252.4
80°	98.2	123.9	172.3	188.9	193.4
82.5°	66.5	90.7	123.9	128.5	130.0
85°	40.8	55.9	72.5	72.5	72.5
87.5°	19.6	22.7	25.7	24.2	24.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)