

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: P309043

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-S-CP250-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: P309043
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-CP250-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.250" 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: 2959.0 lumens
Efficiency: N/A
Efficacy: 106.8 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

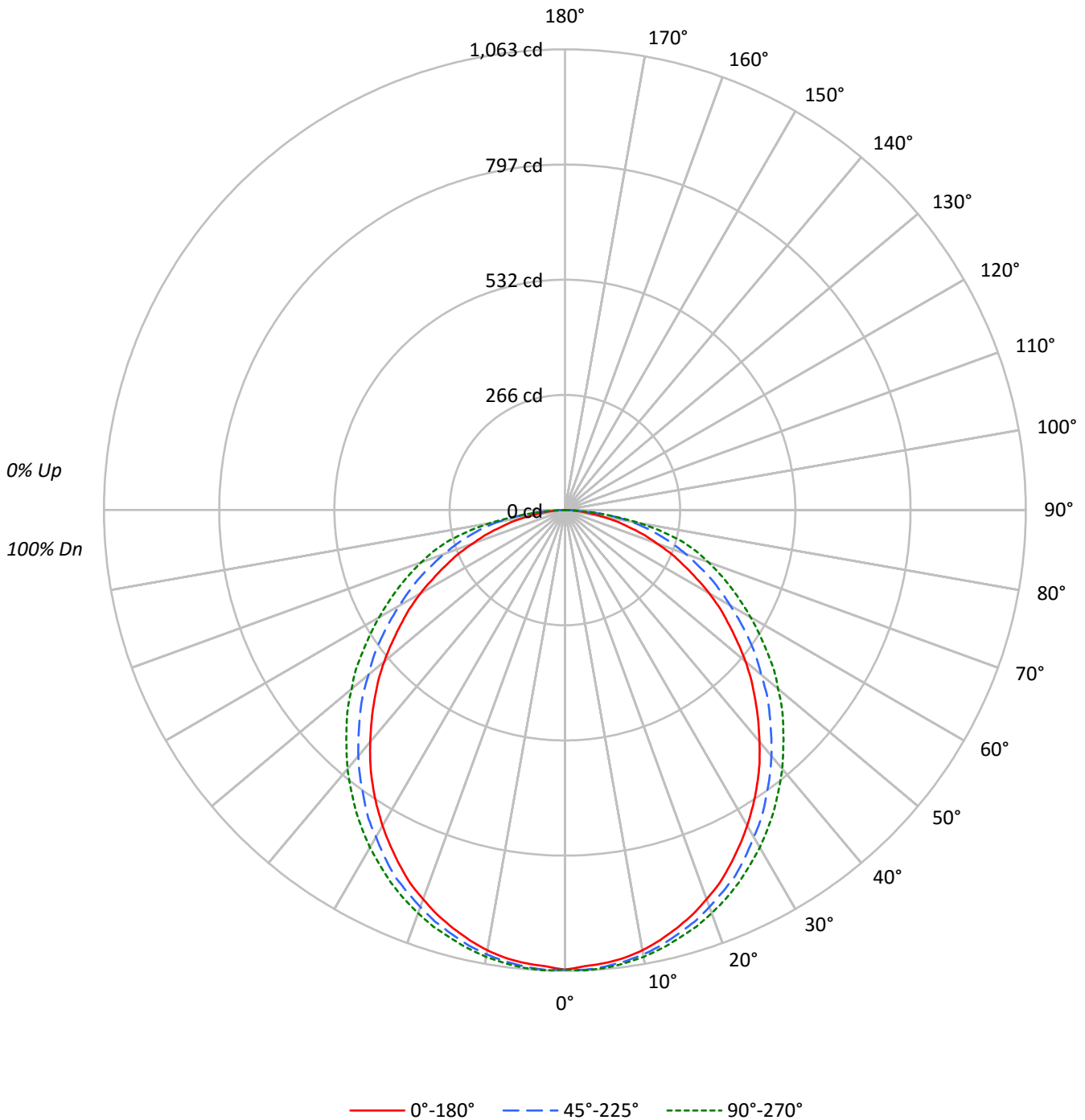
Input Watts (W): 27.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2853	2853	2853
5°	2834	2857	2864
10°	2818	2845	2860
15°	2781	2819	2846
20°	2736	2791	2835
25°	2681	2763	2816
30°	2613	2707	2793
35°	2540	2658	2767
40°	2454	2604	2740
45°	2364	2543	2711
50°	2277	2474	2688
55°	2170	2429	2669
60°	2073	2370	2660
65°	1934	2356	2690
70°	1781	2335	2770
75°	1607	2368	2914
80°	1390	2439	2738
85°	1152	2047	2047



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.3	3.4
10°-20°	285.4	9.6
20°-30°	427.0	14.4
30°-40°	505.6	17.1
40°-50°	515.3	17.4
50°-60°	461.8	15.6
60°-70°	361.6	12.2
70°-80°	233.2	7.9
80°-90°	68.9	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°	812.6	27.5
0°-40°	1318.2	44.5
0°-60°	2295.4	77.6
0°-90°	2959.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2959.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1060	1060	1060	1060	1060	
5°	1049	1052	1058	1059	1060	100
15°	998	1004	1012	1020	1022	281
25°	903	911	930	943	948	416
35°	773	783	809	834	842	483
45°	621	635	668	703	712	480
55°	462	478	518	554	569	415
65°	304	322	370	406	422	302
75°	155	178	228	266	280	166
85°	37	51	66	66	66	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1060.3	1060.3	1060.3	1060.3	1060.3
2.5°	1053.4	1056.2	1061.7	1063.1	1063.1
5°	1049.3	1052.0	1057.5	1058.9	1060.3
7.5°	1042.4	1043.7	1050.6	1053.4	1054.8
10°	1031.3	1034.1	1041.0	1045.1	1046.5
12.5°	1016.1	1020.3	1028.5	1034.1	1035.5
15°	998.2	1003.7	1012.0	1020.3	1021.6
17.5°	978.8	984.4	995.4	1005.1	1007.8
20°	955.4	962.3	974.7	985.7	989.9
22.5°	931.9	937.4	952.6	966.4	970.6
25°	902.9	911.2	930.5	943.0	948.5
27.5°	872.5	882.2	901.5	918.1	923.6
30°	840.8	850.5	871.2	891.9	898.8
32.5°	807.7	818.7	843.5	864.3	871.2
35°	773.1	782.8	809.0	833.9	842.2
37.5°	737.2	745.5	775.9	802.1	810.4
40°	698.6	709.6	741.4	771.8	780.0
42.5°	659.9	672.4	704.1	737.2	745.5
45°	621.3	635.1	668.2	702.7	712.4
47.5°	584.0	595.0	632.3	665.4	679.3
50°	544.0	555.0	590.9	628.2	642.0
52.5°	502.5	517.7	556.4	592.3	608.8
55°	462.5	477.7	517.7	553.6	568.8
57.5°	425.2	437.7	479.1	516.3	531.5
60°	385.2	396.2	440.4	480.4	494.3
62.5°	342.4	359.0	404.5	441.8	458.4
65°	303.7	321.7	370.0	405.9	422.5
67.5°	267.8	284.4	331.3	370.0	387.9
70°	226.4	248.5	296.8	335.5	352.1
72.5°	193.3	212.6	262.3	301.0	318.9
75°	154.6	178.1	227.8	266.5	280.3
77.5°	122.9	146.3	193.3	223.7	230.6
80°	89.7	113.2	157.4	172.6	176.7
82.5°	60.7	82.8	113.2	117.4	118.7
85°	37.3	51.1	66.3	66.3	66.3
87.5°	17.9	20.7	23.5	22.1	22.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)