

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: P312985

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-S-CP250-W2A-U-3000K**

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: P312985
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-3000K
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: 2863.0 lumens
Efficiency: N/A
Efficacy: 104.1 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

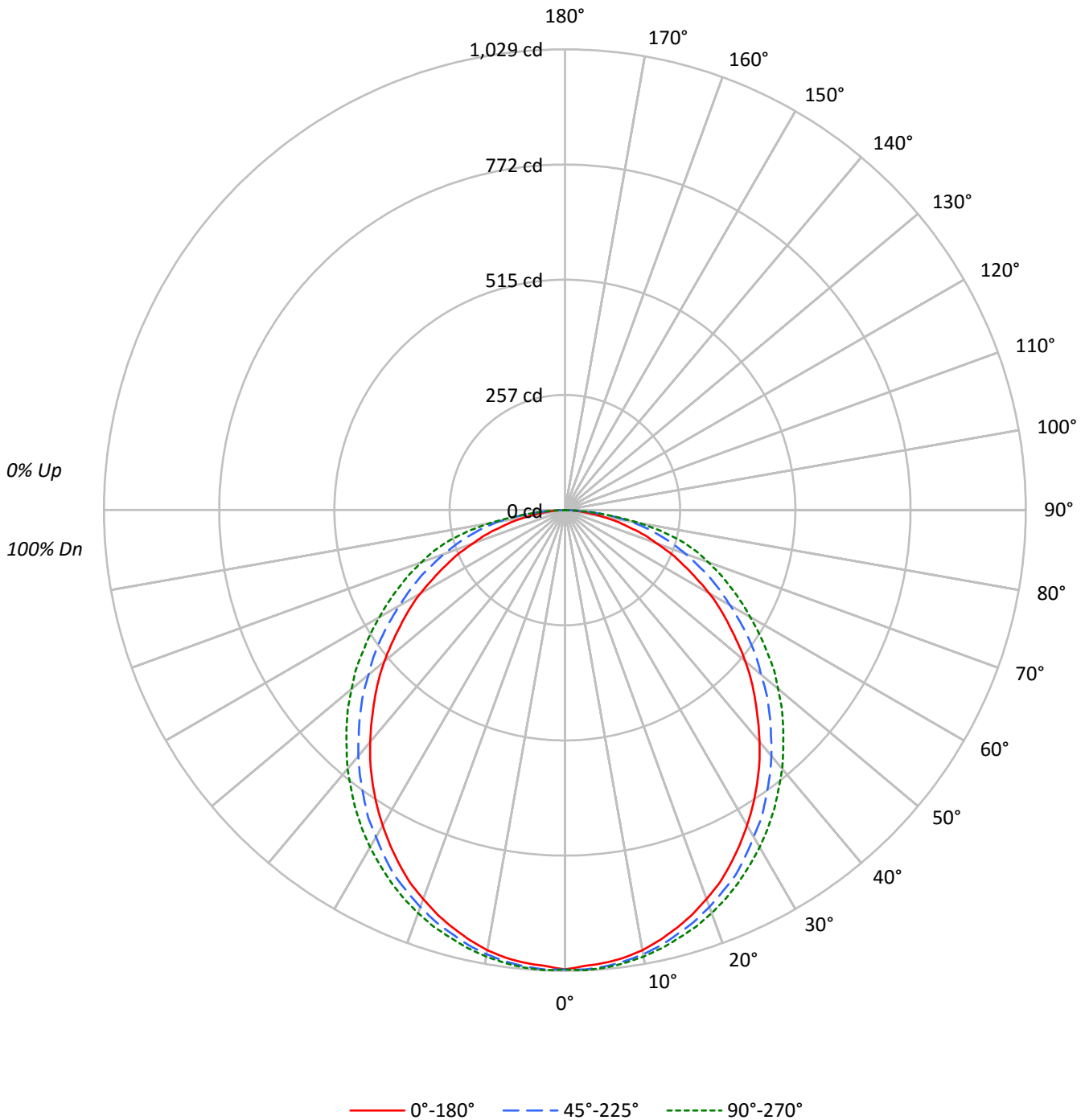
Input Watts (W): 27.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2761	2761	2761
5°	2742	2764	2771
10°	2727	2752	2767
15°	2691	2728	2754
20°	2647	2701	2743
25°	2594	2673	2725
30°	2528	2619	2702
35°	2458	2572	2677
40°	2374	2520	2651
45°	2288	2460	2623
50°	2203	2393	2601
55°	2099	2350	2582
60°	2006	2293	2574
65°	1871	2280	2603
70°	1724	2260	2680
75°	1555	2292	2820
80°	1345	2360	2650
85°	1115	1979	1979



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.0	3.4
10°-20°	276.1	9.6
20°-30°	413.1	14.4
30°-40°	489.2	17.1
40°-50°	498.6	17.4
50°-60°	446.9	15.6
60°-70°	349.9	12.2
70°-80°	225.6	7.9
80°-90°	66.6	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°	786.2	27.5
0°-40°	1275.4	44.5
0°-60°	2220.9	77.6
0°-90°	2863.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2863.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1026	1026	1026	1026	1026	
5°	1015	1018	1023	1025	1026	96
15°	966	971	979	987	988	272
25°	874	882	900	912	918	402
35°	748	757	783	807	815	468
45°	601	614	646	680	689	464
55°	448	462	501	536	550	401
65°	294	311	358	393	409	292
75°	150	172	220	258	271	160
85°	36	49	64	64	64	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1025.9	1025.9	1025.9	1025.9	1025.9
2.5°	1019.2	1021.9	1027.2	1028.6	1028.6
5°	1015.2	1017.9	1023.2	1024.6	1025.9
7.5°	1008.5	1009.9	1016.6	1019.2	1020.6
10°	997.9	1000.5	1007.2	1011.2	1012.5
12.5°	983.2	987.2	995.2	1000.5	1001.9
15°	965.8	971.1	979.1	987.2	988.5
17.5°	947.1	952.4	963.1	972.5	975.1
20°	924.4	931.1	943.1	953.8	957.8
22.5°	901.7	907.0	921.7	935.1	939.1
25°	873.6	881.6	900.3	912.4	917.7
27.5°	844.2	853.6	872.3	888.3	893.7
30°	813.5	822.9	842.9	862.9	869.6
32.5°	781.4	792.1	816.2	836.2	842.9
35°	748.1	757.4	782.8	806.8	814.8
37.5°	713.3	721.3	750.7	776.1	784.1
40°	675.9	686.6	717.3	746.7	754.7
42.5°	638.5	650.5	681.3	713.3	721.3
45°	601.1	614.5	646.5	679.9	689.3
47.5°	565.0	575.7	611.8	643.9	657.2
50°	526.3	537.0	571.7	607.8	621.2
52.5°	486.2	500.9	538.3	573.1	589.1
55°	447.5	462.2	500.9	535.7	550.4
57.5°	411.4	423.5	463.5	499.6	514.3
60°	372.7	383.4	426.1	464.9	478.2
62.5°	331.3	347.3	391.4	427.5	443.5
65°	293.9	311.2	358.0	392.7	408.8
67.5°	259.1	275.2	320.6	358.0	375.4
70°	219.1	240.4	287.2	324.6	340.6
72.5°	187.0	205.7	253.8	291.2	308.6
75°	149.6	172.3	220.4	257.8	271.2
77.5°	118.9	141.6	187.0	216.4	223.1
80°	86.8	109.5	152.3	167.0	171.0
82.5°	58.8	80.1	109.5	113.5	114.9
85°	36.1	49.4	64.1	64.1	64.1
87.5°	17.4	20.0	22.7	21.4	21.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)