

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: P312837

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-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: P312837
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
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-CP250-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, RIBBED 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: 3016.0 lumens
Efficiency: N/A
Efficacy: 107.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

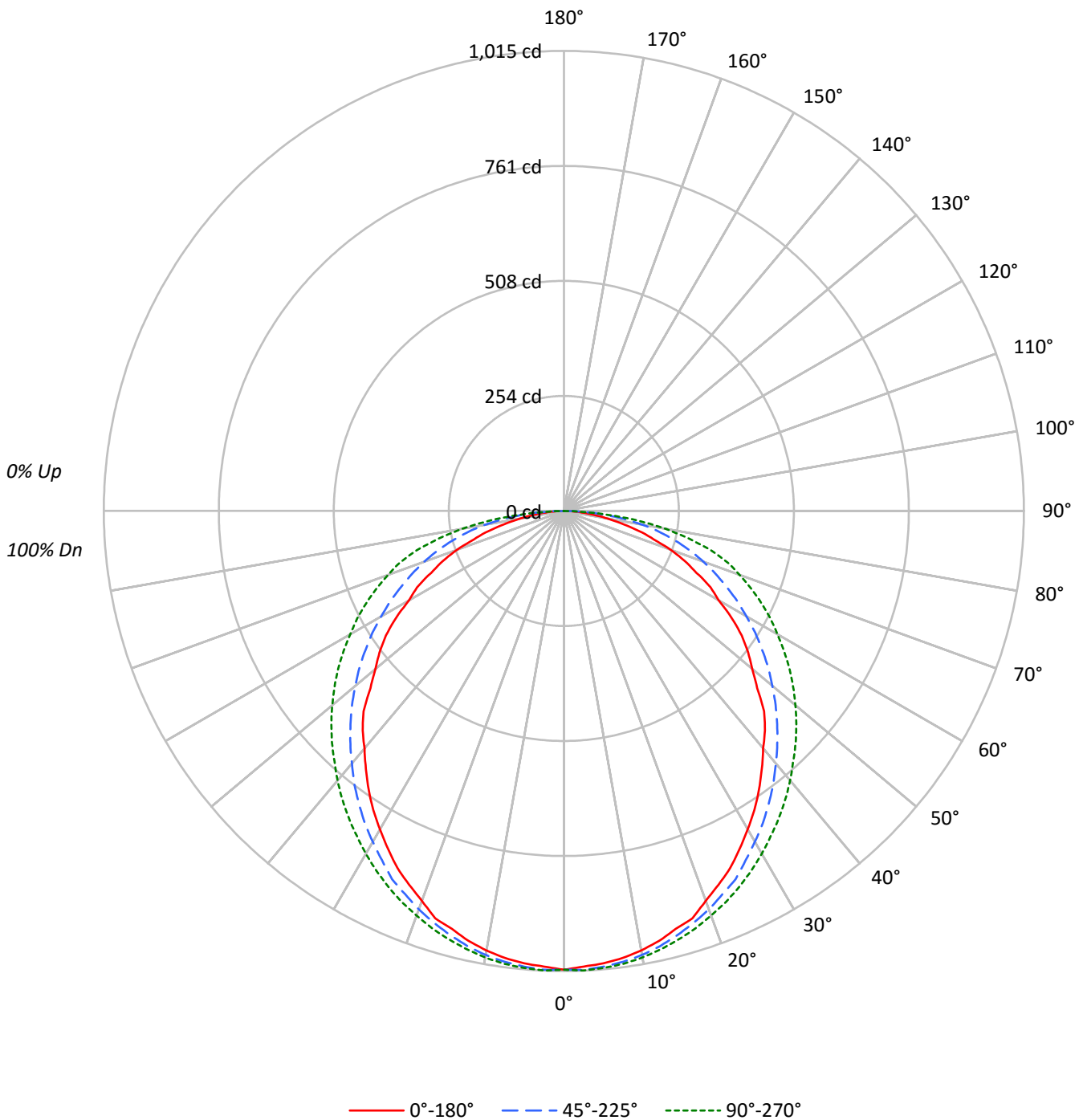
Input Watts (W): 28.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2723	2723	2723
5°	2706	2726	2733
10°	2690	2718	2733
15°	2658	2698	2727
20°	2621	2679	2720
25°	2580	2662	2717
30°	2521	2619	2714
35°	2466	2589	2717
40°	2403	2556	2728
45°	2379	2533	2752
50°	2272	2514	2792
55°	2248	2506	2851
60°	2121	2502	2929
65°	2059	2518	3061
70°	1976	2578	3248
75°	1801	2656	3497
80°	1543	2752	3535
85°	1247	2631	3032



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.8	3.2
10°-20°	273.1	9.1
20°-30°	411.1	13.6
30°-40°	493.4	16.4
40°-50°	515.7	17.1
50°-60°	480.6	15.9
60°-70°	394.2	13.1
70°-80°	265.6	8.8
80°-90°	86.5	2.9
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°	780.0	25.9
0°-40°	1273.4	42.2
0°-60°	2269.7	75.3
0°-90°	3016.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3016.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1012	1012	1012	1012	1012	
5°	1002	1005	1009	1010	1012	95
15°	954	960	969	977	979	270
25°	869	875	896	909	915	399
35°	751	761	788	816	827	469
45°	625	629	666	706	723	477
55°	479	488	534	585	608	425
65°	323	338	396	453	481	322
75°	173	192	256	313	336	182
85°	40	58	85	100	98	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1011.9	1011.9	1011.9	1011.9	1011.9
2.5°	1006.1	1009.0	1013.3	1014.8	1014.8
5°	1001.8	1004.7	1009.0	1010.5	1011.9
7.5°	994.6	997.5	1003.2	1006.1	1007.6
10°	984.5	987.4	994.6	998.9	1000.3
12.5°	971.5	974.4	983.0	988.8	990.2
15°	954.2	959.9	968.6	977.2	978.7
17.5°	942.6	941.2	952.7	962.8	965.7
20°	915.2	922.4	935.4	946.9	949.8
22.5°	892.1	897.9	915.2	928.2	933.9
25°	869.0	874.8	896.4	909.4	915.2
27.5°	840.1	848.8	869.0	887.8	895.0
30°	811.2	819.9	843.0	864.7	873.3
32.5°	782.4	792.5	817.0	840.1	850.2
35°	750.6	760.7	788.2	815.6	827.1
37.5°	717.4	730.4	759.3	789.6	802.6
40°	684.2	697.2	727.5	762.2	776.6
42.5°	656.8	662.6	697.2	734.7	749.2
45°	625.0	629.4	665.5	705.9	723.2
47.5°	578.8	594.7	633.7	678.4	695.8
50°	542.8	560.1	600.5	648.1	666.9
52.5°	512.4	524.0	568.7	616.4	638.0
55°	479.2	487.9	534.1	584.6	607.7
57.5°	438.8	454.7	500.9	552.9	576.0
60°	394.1	414.3	464.8	521.1	544.2
62.5°	365.2	376.8	431.6	487.9	513.9
65°	323.3	337.8	395.5	453.3	480.7
67.5°	288.7	303.1	362.3	420.1	447.5
70°	251.2	265.6	327.7	385.4	412.8
72.5°	207.9	228.1	293.0	350.8	379.6
75°	173.2	192.0	255.5	313.2	336.3
77.5°	134.2	158.8	218.0	265.6	282.9
80°	99.6	124.1	177.6	212.2	228.1
82.5°	67.8	92.4	132.8	158.8	167.4
85°	40.4	57.7	85.2	99.6	98.2
87.5°	18.8	24.5	34.6	34.6	33.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)