

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: P312823

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-CA125-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: P312823
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-CA125-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 4500K 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: 3269.0 lumens
Efficiency: N/A
Efficacy: 112.7 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

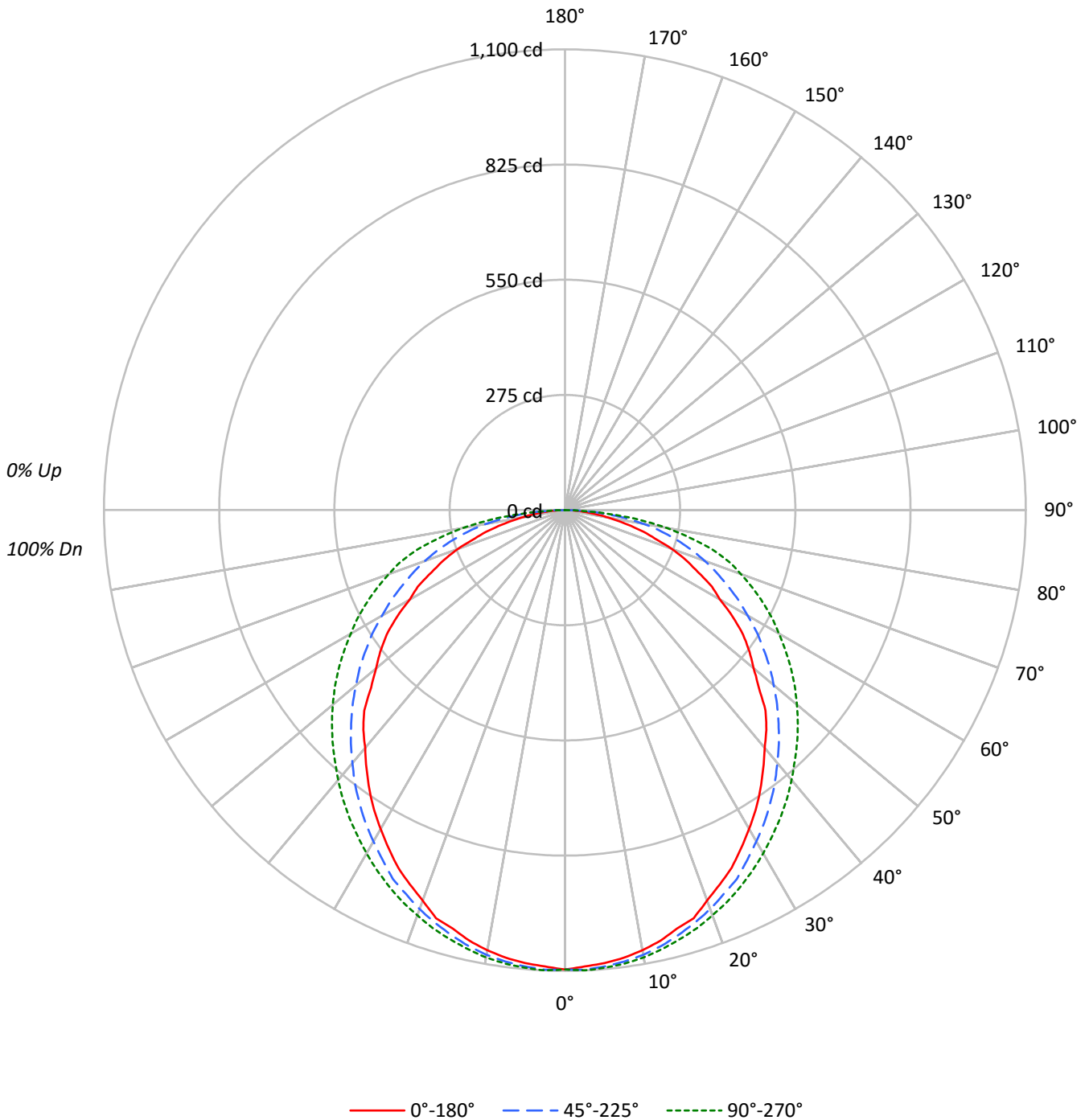
Input Watts (W): 29
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2951	2951	2951
5°	2933	2954	2963
10°	2916	2946	2963
15°	2881	2925	2955
20°	2840	2903	2948
25°	2797	2885	2945
30°	2732	2839	2941
35°	2673	2806	2945
40°	2605	2770	2957
45°	2578	2745	2983
50°	2463	2725	3026
55°	2437	2716	3090
60°	2299	2711	3175
65°	2232	2730	3317
70°	2142	2795	3521
75°	1953	2879	3790
80°	1674	2982	3831
85°	1352	2850	3285



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.8	3.2
10°-20°	296.1	9.1
20°-30°	445.6	13.6
30°-40°	534.8	16.4
40°-50°	559.0	17.1
50°-60°	520.9	15.9
60°-70°	427.2	13.1
70°-80°	287.9	8.8
80°-90°	93.8	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°	845.4	25.9
0°-40°	1380.2	42.2
0°-60°	2460.1	75.3
0°-90°	3269.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3269.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1097	1097	1097	1097	1097	
5°	1086	1089	1094	1095	1097	103
15°	1034	1040	1050	1059	1061	292
25°	942	948	972	986	992	433
35°	814	824	854	884	896	509
45°	678	682	721	765	784	518
55°	519	529	579	634	659	460
65°	350	366	429	491	521	349
75°	188	208	277	340	364	197
85°	44	63	92	108	106	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1096.8	1096.8	1096.8	1096.8	1096.8
2.5°	1090.5	1093.6	1098.3	1099.9	1099.9
5°	1085.8	1089.0	1093.6	1095.2	1096.8
7.5°	1078.0	1081.1	1087.4	1090.5	1092.1
10°	1067.1	1070.2	1078.0	1082.7	1084.3
12.5°	1053.0	1056.1	1065.5	1071.7	1073.3
15°	1034.2	1040.5	1049.8	1059.2	1060.8
17.5°	1021.7	1020.1	1032.6	1043.6	1046.7
20°	991.9	999.8	1013.9	1026.4	1029.5
22.5°	966.9	973.2	991.9	1006.0	1012.3
25°	941.9	948.1	971.6	985.7	991.9
27.5°	910.6	920.0	941.9	962.2	970.0
30°	879.3	888.7	913.7	937.2	946.6
32.5°	848.0	859.0	885.6	910.6	921.5
35°	813.6	824.5	854.3	884.0	896.5
37.5°	777.6	791.7	823.0	855.8	869.9
40°	741.6	755.7	788.6	826.1	841.7
42.5°	711.9	718.1	755.7	796.4	812.0
45°	677.5	682.2	721.3	765.1	783.9
47.5°	627.4	644.6	686.9	735.4	754.1
50°	588.3	607.1	650.9	702.5	722.8
52.5°	555.4	567.9	616.4	668.1	691.5
55°	519.4	528.8	578.9	633.7	658.7
57.5°	475.6	492.8	542.9	599.2	624.3
60°	427.1	449.0	503.8	564.8	589.9
62.5°	395.8	408.4	467.8	528.8	557.0
65°	350.5	366.1	428.7	491.3	521.0
67.5°	312.9	328.6	392.7	455.3	485.0
70°	272.2	287.9	355.2	417.7	447.5
72.5°	225.3	247.2	317.6	380.2	411.5
75°	187.8	208.1	276.9	339.5	364.5
77.5°	145.5	172.1	236.3	287.9	306.7
80°	108.0	134.6	192.4	230.0	247.2
82.5°	73.5	100.1	143.9	172.1	181.5
85°	43.8	62.6	92.3	108.0	106.4
87.5°	20.3	26.6	37.6	37.6	36.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)