

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: P312821

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-CA125-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: P312821
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-3500K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 3500K 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: 3084.0 lumens
Efficiency: N/A
Efficacy: 111.7 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

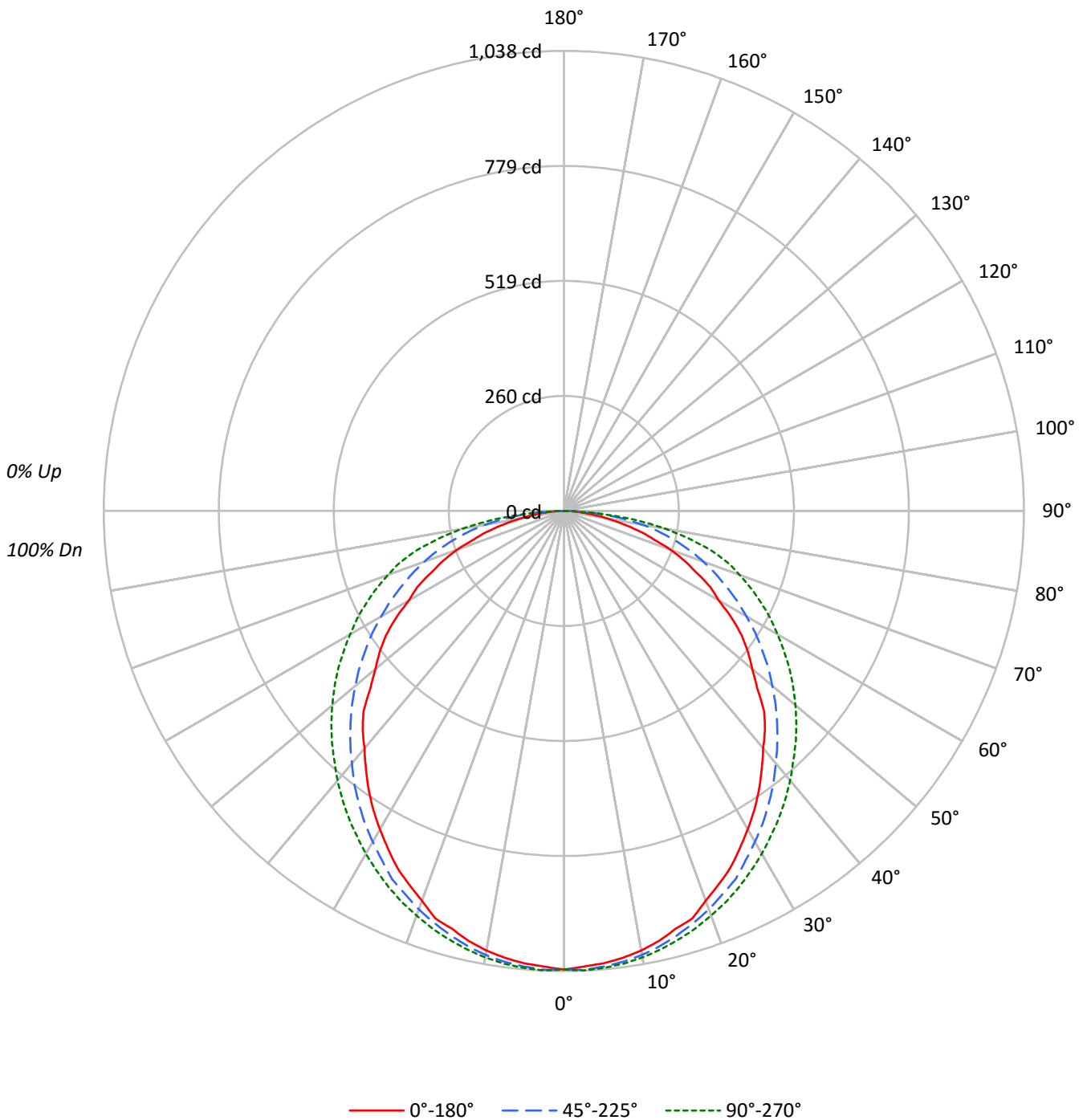
Input Watts (W): 27.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2784	2784	2784
5°	2767	2787	2795
10°	2751	2779	2795
15°	2718	2759	2788
20°	2680	2739	2781
25°	2638	2722	2779
30°	2577	2678	2775
35°	2521	2647	2779
40°	2458	2613	2790
45°	2432	2590	2814
50°	2323	2570	2855
55°	2299	2562	2915
60°	2169	2558	2995
65°	2105	2575	3130
70°	2020	2637	3321
75°	1841	2717	3576
80°	1578	2814	3614
85°	1275	2689	3100



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.9	3.2
10°-20°	279.3	9.1
20°-30°	420.4	13.6
30°-40°	504.5	16.4
40°-50°	527.3	17.1
50°-60°	491.4	15.9
60°-70°	403.1	13.1
70°-80°	271.6	8.8
80°-90°	88.5	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°	797.6	25.9
0°-40°	1302.1	42.2
0°-60°	2320.9	75.3
0°-90°	3084.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3084.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1035	1035	1035	1035	1035	
5°	1024	1027	1032	1033	1035	97
15°	976	982	990	999	1001	276
25°	889	894	917	930	936	408
35°	768	778	806	834	846	480
45°	639	644	680	722	740	488
55°	490	499	546	598	621	434
65°	331	345	404	464	492	329
75°	177	196	261	320	344	186
85°	41	59	87	102	100	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1034.7	1034.7	1034.7	1034.7	1034.7
2.5°	1028.8	1031.8	1036.2	1037.7	1037.7
5°	1024.4	1027.3	1031.8	1033.2	1034.7
7.5°	1017.0	1019.9	1025.9	1028.8	1030.3
10°	1006.7	1009.6	1017.0	1021.4	1022.9
12.5°	993.4	996.3	1005.2	1011.1	1012.6
15°	975.7	981.6	990.4	999.3	1000.8
17.5°	963.9	962.4	974.2	984.5	987.5
20°	935.8	943.2	956.5	968.3	971.2
22.5°	912.2	918.1	935.8	949.1	955.0
25°	888.6	894.5	916.6	929.9	935.8
27.5°	859.1	867.9	888.6	907.8	915.1
30°	829.5	838.4	862.0	884.2	893.0
32.5°	800.0	810.3	835.4	859.1	869.4
35°	767.5	777.9	805.9	834.0	845.8
37.5°	733.6	746.9	776.4	807.4	820.7
40°	699.6	712.9	743.9	779.4	794.1
42.5°	671.6	677.5	712.9	751.3	766.1
45°	639.1	643.6	680.5	721.8	739.5
47.5°	591.9	608.1	648.0	693.7	711.5
50°	555.0	572.7	614.0	662.7	681.9
52.5°	524.0	535.8	581.6	630.3	652.4
55°	490.0	498.9	546.1	597.8	621.4
57.5°	448.7	465.0	512.2	565.3	588.9
60°	403.0	423.6	475.3	532.9	556.5
62.5°	373.4	385.2	441.3	498.9	525.5
65°	330.6	345.4	404.4	463.5	491.5
67.5°	295.2	310.0	370.5	429.5	457.6
70°	256.8	271.6	335.1	394.1	422.1
72.5°	212.6	233.2	299.6	358.7	388.2
75°	177.1	196.3	261.3	320.3	343.9
77.5°	137.3	162.4	222.9	271.6	289.3
80°	101.8	126.9	181.6	217.0	233.2
82.5°	69.4	94.5	135.8	162.4	171.2
85°	41.3	59.0	87.1	101.8	100.4
87.5°	19.2	25.1	35.4	35.4	33.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)