

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: P312587

Luminaire Tested: **22FCZ2-44HE-UNV-L83050-HRP-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: P312587
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-44HE-UNV-L83050-HRP-CP250-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 3122.0 lumens
Efficiency: N/A
Efficacy: 81.9 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

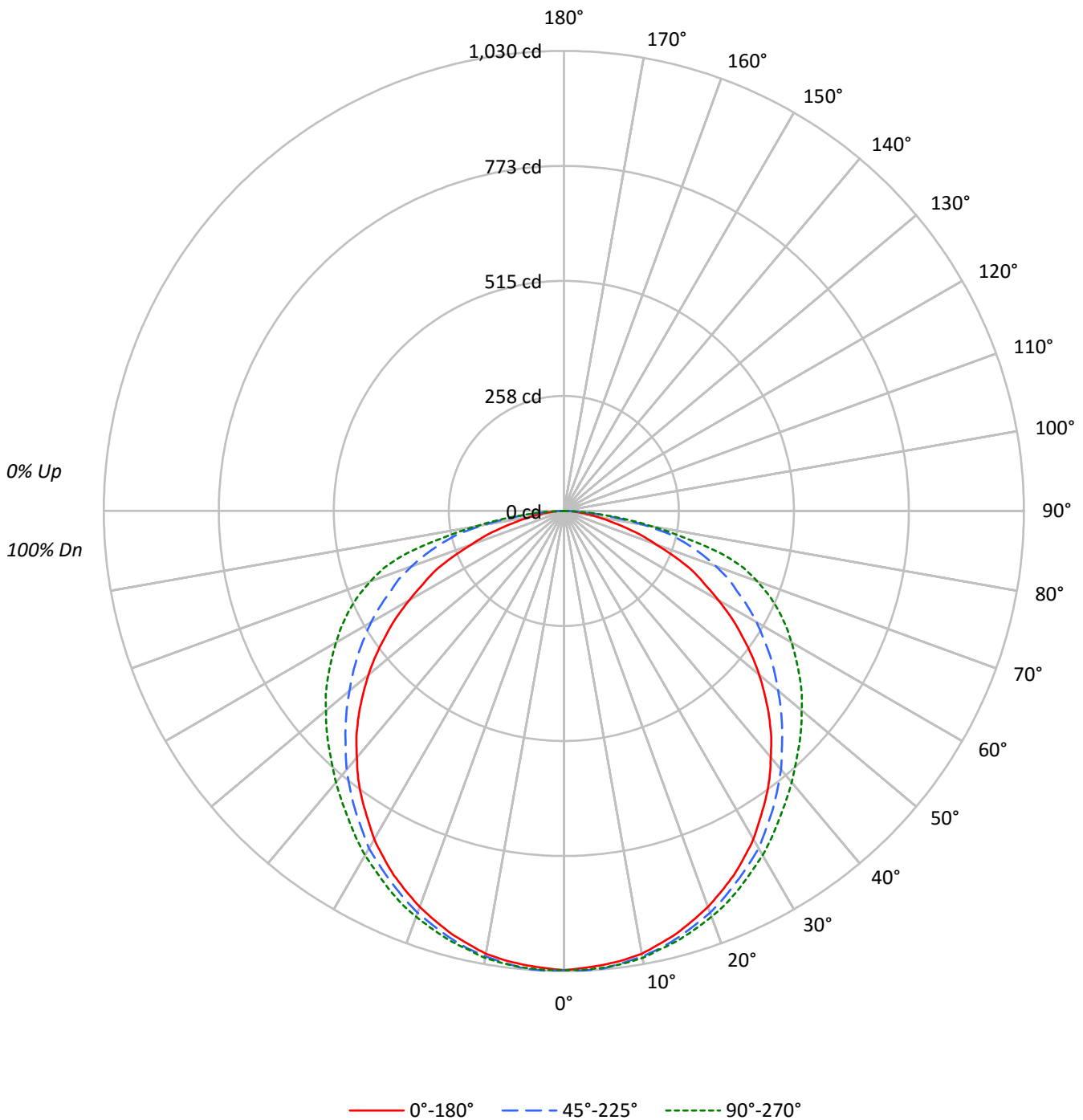
Input Watts (W): 38.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	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	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
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	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2766	2766	2766
5°	2756	2777	2772
10°	2750	2766	2777
15°	2727	2754	2771
20°	2702	2741	2769
25°	2672	2719	2766
30°	2637	2711	2766
35°	2588	2678	2762
40°	2532	2657	2788
45°	2473	2631	2833
50°	2391	2622	2910
55°	2282	2643	3021
60°	2152	2682	3169
65°	2031	2734	3386
70°	1736	2851	3626
75°	1454	2969	3768
80°	1190	2868	3144
85°	1034	2127	2309



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.4	3.1
10°-20°	278.7	8.9
20°-30°	422.4	13.5
30°-40°	510.0	16.3
40°-50°	535.9	17.2
50°-60°	504.3	16.2
60°-70°	420.4	13.5
70°-80°	278.6	8.9
80°-90°	74.2	2.4
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°	798.5	25.6
0°-40°	1308.6	41.9
0°-60°	2348.7	75.2
0°-90°	3122.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3122.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1028	1028	1028	1028	1028	
5°	1020	1022	1028	1028	1026	97
15°	979	983	989	993	995	276
25°	900	906	916	928	932	414
35°	788	796	815	833	841	493
45°	650	660	691	727	744	501
55°	486	508	563	620	644	435
65°	319	347	429	500	532	310
75°	140	195	286	345	362	152
85°	34	51	69	75	75	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1028.0	1028.0	1028.0	1028.0	1028.0
2.5°	1024.1	1026.1	1030.0	1030.0	1028.0
5°	1020.2	1022.1	1028.0	1028.0	1026.1
7.5°	1014.3	1016.2	1020.2	1024.1	1022.1
10°	1006.4	1008.3	1012.3	1016.2	1016.2
12.5°	992.6	994.6	1002.4	1004.4	1004.4
15°	978.8	982.7	988.7	992.6	994.6
17.5°	961.1	965.0	972.9	980.8	980.8
20°	943.4	947.3	957.1	965.0	967.0
22.5°	921.7	927.6	937.4	947.3	951.2
25°	900.0	905.9	915.8	927.6	931.5
27.5°	874.4	880.3	894.1	907.9	909.9
30°	848.8	854.7	872.5	884.3	890.2
32.5°	817.3	825.2	842.9	860.6	866.5
35°	787.8	795.6	815.3	833.1	840.9
37.5°	756.3	764.1	785.8	807.5	817.3
40°	720.8	730.7	756.3	779.9	793.7
42.5°	687.3	697.2	722.8	754.3	768.1
45°	649.9	659.8	691.3	726.7	744.4
47.5°	610.5	622.3	659.8	703.1	720.8
50°	571.1	584.9	626.3	675.5	695.2
52.5°	529.8	547.5	594.8	647.9	671.6
55°	486.4	508.1	563.3	620.4	644.0
57.5°	445.1	464.8	529.8	590.8	616.4
60°	399.8	425.4	498.3	561.3	588.9
62.5°	356.5	384.0	464.8	531.7	561.3
65°	319.0	346.6	429.3	500.2	531.7
67.5°	269.8	307.2	399.8	466.8	498.3
70°	220.6	271.8	362.4	431.3	460.8
72.5°	183.2	232.4	325.0	393.9	421.5
75°	139.8	195.0	285.6	344.6	362.4
77.5°	104.4	161.5	244.2	273.7	275.7
80°	76.8	124.1	185.1	195.0	202.9
82.5°	53.2	86.7	120.1	132.0	135.9
85°	33.5	51.2	68.9	74.8	74.8
87.5°	17.7	19.7	23.6	23.6	23.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)