

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: P312562

Luminaire Tested: **22FCZ2-39HE-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: P312562
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: 22FCZ2-39HE-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: 2783.0 lumens
Efficiency: N/A
Efficacy: 84.1 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

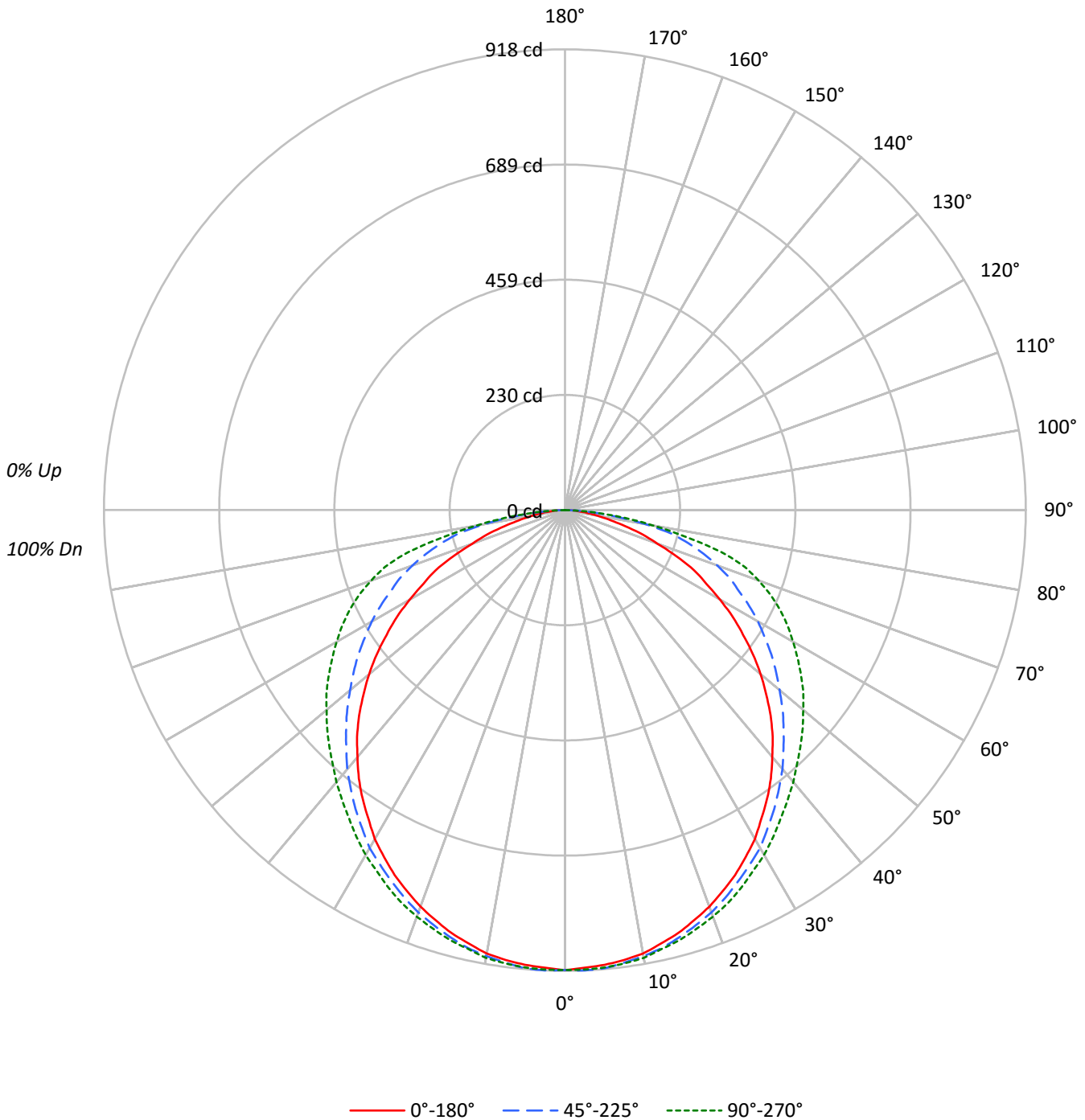
Input Watts (W): 33.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2466	2466	2466
5°	2457	2475	2471
10°	2451	2466	2475
15°	2431	2455	2470
20°	2408	2443	2468
25°	2382	2424	2466
30°	2351	2417	2466
35°	2307	2388	2462
40°	2257	2368	2485
45°	2205	2345	2525
50°	2131	2337	2594
55°	2034	2356	2693
60°	1918	2391	2825
65°	1811	2437	3018
70°	1547	2541	3232
75°	1295	2647	3358
80°	1062	2557	2802
85°	920	1896	2059



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.9	3.1
10°-20°	248.4	8.9
20°-30°	376.5	13.5
30°-40°	454.7	16.3
40°-50°	477.7	17.2
50°-60°	449.5	16.2
60°-70°	374.8	13.5
70°-80°	248.3	8.9
80°-90°	66.2	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°	711.8	25.6
0°-40°	1166.5	41.9
0°-60°	2093.7	75.2
0°-90°	2783.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2783.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	916	916	916	916	916	
5°	909	911	916	916	915	86
15°	872	876	881	885	887	246
25°	802	808	816	827	830	369
35°	702	709	727	743	750	439
45°	579	588	616	648	664	446
55°	434	453	502	553	574	388
65°	284	309	383	446	474	277
75°	125	174	255	307	323	135
85°	30	46	61	67	67	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	916.4	916.4	916.4	916.4	916.4
2.5°	912.9	914.7	918.2	918.2	916.4
5°	909.4	911.1	916.4	916.4	914.7
7.5°	904.1	905.9	909.4	912.9	911.1
10°	897.1	898.9	902.4	905.9	905.9
12.5°	884.8	886.6	893.6	895.3	895.3
15°	872.5	876.0	881.3	884.8	886.6
17.5°	856.7	860.2	867.3	874.3	874.3
20°	840.9	844.4	853.2	860.2	862.0
22.5°	821.6	826.9	835.7	844.4	847.9
25°	802.3	807.6	816.3	826.9	830.4
27.5°	779.5	784.7	797.0	809.3	811.1
30°	756.7	761.9	777.7	788.3	793.5
32.5°	728.6	735.6	751.4	767.2	772.5
35°	702.2	709.3	726.8	742.6	749.6
37.5°	674.1	681.2	700.5	719.8	728.6
40°	642.5	651.3	674.1	695.2	707.5
42.5°	612.7	621.5	644.3	672.4	684.7
45°	579.3	588.1	616.2	647.8	663.6
47.5°	544.2	554.8	588.1	626.7	642.5
50°	509.1	521.4	558.3	602.2	619.7
52.5°	472.2	488.1	530.2	577.6	598.7
55°	433.6	452.9	502.1	553.0	574.1
57.5°	396.8	414.3	472.2	526.7	549.5
60°	356.4	379.2	444.2	500.3	524.9
62.5°	317.8	342.3	414.3	474.0	500.3
65°	284.4	309.0	382.7	445.9	474.0
67.5°	240.5	273.9	356.4	416.1	444.2
70°	196.6	242.3	323.0	384.5	410.8
72.5°	163.3	207.2	289.7	351.1	375.7
75°	124.6	173.8	254.6	307.2	323.0
77.5°	93.0	144.0	217.7	244.0	245.8
80°	68.5	110.6	165.0	173.8	180.8
82.5°	47.4	77.2	107.1	117.6	121.1
85°	29.8	45.6	61.4	66.7	66.7
87.5°	15.8	17.6	21.1	21.1	21.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)