

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: P312563

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-HRP-CP250-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: P312563
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-4500K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB 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: 2810.0 lumens
Efficiency: N/A
Efficacy: 82.6 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

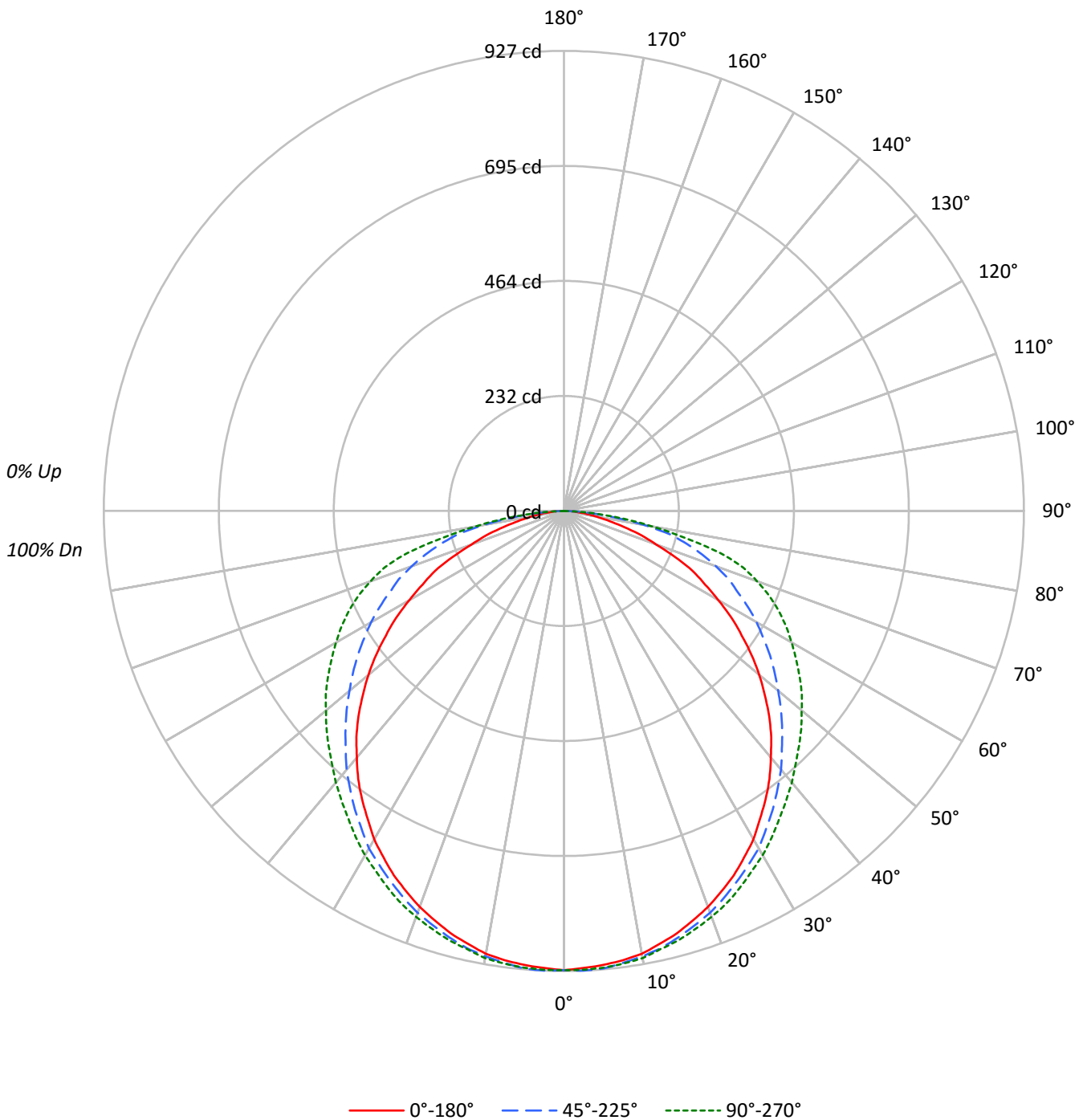
Input Watts (W): 34
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2490	2490	2490
5°	2480	2499	2495
10°	2475	2490	2499
15°	2454	2479	2494
20°	2432	2467	2493
25°	2405	2447	2489
30°	2374	2440	2490
35°	2329	2411	2486
40°	2279	2391	2510
45°	2226	2368	2550
50°	2152	2360	2619
55°	2054	2379	2719
60°	1936	2414	2852
65°	1829	2460	3047
70°	1562	2567	3264
75°	1309	2672	3392
80°	1071	2582	2830
85°	929	1914	2081



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.7	3.1
10°-20°	250.9	8.9
20°-30°	380.2	13.5
30°-40°	459.1	16.3
40°-50°	482.4	17.2
50°-60°	453.9	16.2
60°-70°	378.4	13.5
70°-80°	250.7	8.9
80°-90°	66.8	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°	718.7	25.6
0°-40°	1177.8	41.9
0°-60°	2114.0	75.2
0°-90°	2810.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2810.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	925	925	925	925	925	
5°	918	920	925	925	924	87
15°	881	884	890	893	895	248
25°	810	815	824	835	838	373
35°	709	716	734	750	757	443
45°	585	594	622	654	670	451
55°	438	457	507	558	580	392
65°	287	312	386	450	479	279
75°	126	176	257	310	326	137
85°	30	46	62	67	67	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	925.3	925.3	925.3	925.3	925.3
2.5°	921.8	923.5	927.1	927.1	925.3
5°	918.2	920.0	925.3	925.3	923.5
7.5°	912.9	914.7	918.2	921.8	920.0
10°	905.8	907.6	911.1	914.7	914.7
12.5°	893.4	895.2	902.3	904.0	904.0
15°	881.0	884.5	889.8	893.4	895.2
17.5°	865.0	868.6	875.7	882.8	882.8
20°	849.1	852.6	861.5	868.6	870.4
22.5°	829.6	834.9	843.8	852.6	856.2
25°	810.1	815.4	824.3	834.9	838.4
27.5°	787.0	792.4	804.8	817.2	818.9
30°	764.0	769.3	785.3	795.9	801.2
32.5°	735.6	742.7	758.7	774.6	779.9
35°	709.0	716.1	733.9	749.8	756.9
37.5°	680.7	687.8	707.3	726.8	735.6
40°	648.8	657.6	680.7	702.0	714.4
42.5°	618.6	627.5	650.5	678.9	691.3
45°	585.0	593.8	622.2	654.1	670.0
47.5°	549.5	560.1	593.8	632.8	648.8
50°	514.1	526.5	563.7	608.0	625.7
52.5°	476.8	492.8	535.3	583.2	604.5
55°	437.8	457.3	507.0	558.4	579.6
57.5°	400.6	418.3	476.8	531.8	554.8
60°	359.8	382.9	448.5	505.2	530.0
62.5°	320.8	345.7	418.3	478.6	505.2
65°	287.2	312.0	386.4	450.2	478.6
67.5°	242.8	276.5	359.8	420.1	448.5
70°	198.5	244.6	326.2	388.2	414.8
72.5°	164.9	209.2	292.5	354.5	379.3
75°	125.9	175.5	257.0	310.2	326.2
77.5°	93.9	145.4	219.8	246.4	248.2
80°	69.1	111.7	166.6	175.5	182.6
82.5°	47.9	78.0	108.1	118.8	122.3
85°	30.1	46.1	62.0	67.4	67.4
87.5°	16.0	17.7	21.3	21.3	21.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)