

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: P312713

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-RDP-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: P312713
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
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-RDP-CP250-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 2335.0 lumens
Efficiency: N/A
Efficacy: 68.7 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

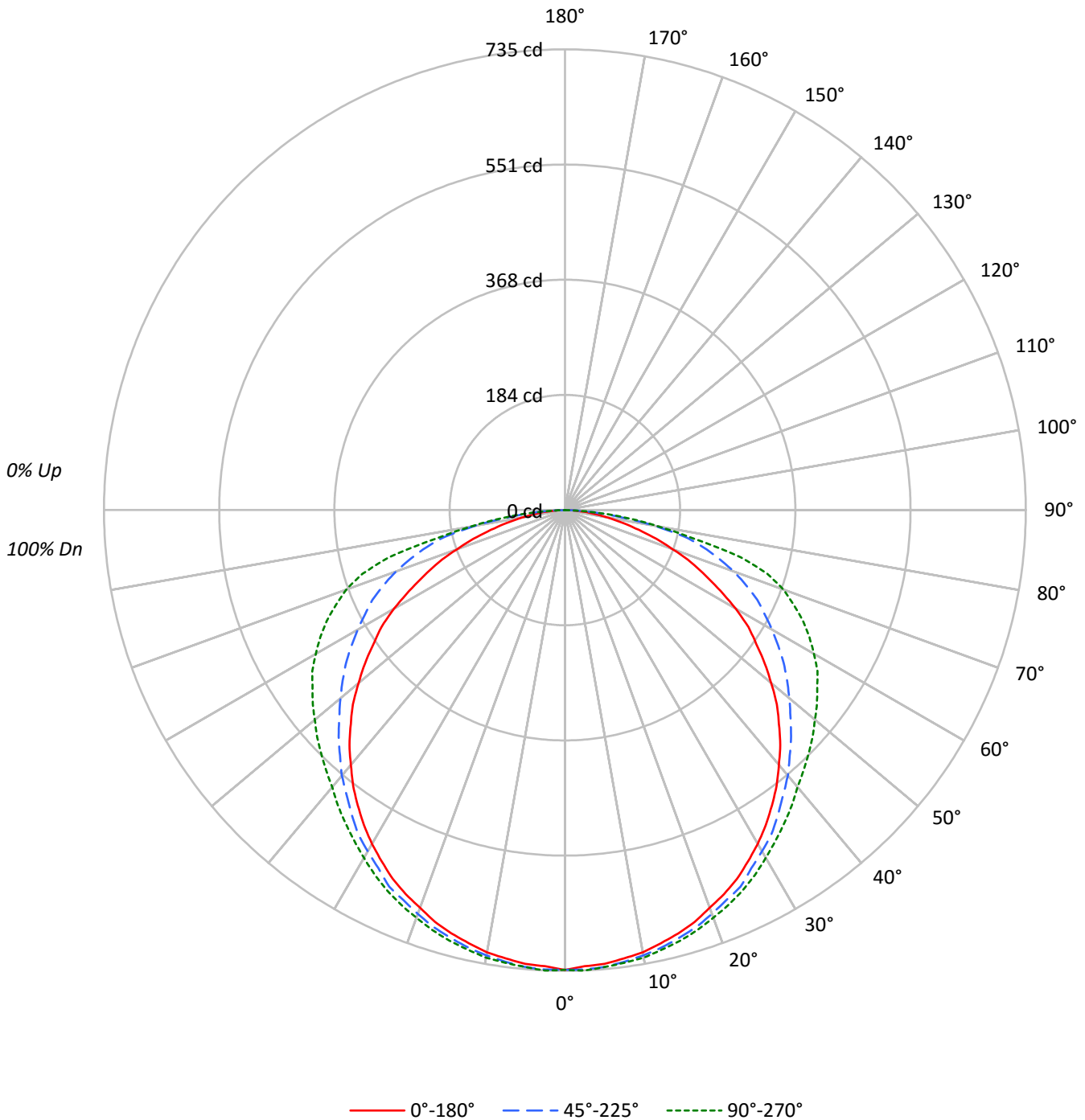
Input Watts (W): 34
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1974	1974	1974
5°	1963	1977	1977
10°	1957	1971	1981
15°	1948	1967	1981
20°	1933	1963	1982
25°	1928	1969	1989
30°	1911	1954	1991
35°	1890	1947	2003
40°	1865	1943	2028
45°	1837	1942	2092
50°	1798	1956	2179
55°	1749	1999	2305
60°	1692	2052	2468
65°	1575	2155	2669
70°	1446	2257	2919
75°	1268	2376	3018
80°	1091	2263	2369
85°	954	1643	1803



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.4	3.0
10°-20°	199.2	8.5
20°-30°	303.9	13.0
30°-40°	371.1	15.9
40°-50°	396.8	17.0
50°-60°	383.0	16.4
60°-70°	329.7	14.1
70°-80°	223.1	9.6
80°-90°	58.9	2.5
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°	572.5	24.5
0°-40°	943.6	40.4
0°-60°	1723.4	73.8
0°-90°	2335.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2335.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	734	734	734	734	734	
5°	727	728	732	732	732	69
15°	699	701	706	709	711	197
25°	649	653	663	666	670	299
35°	575	581	593	605	610	360
45°	483	491	510	536	550	373
55°	373	385	426	469	491	334
65°	247	271	338	392	419	246
75°	122	162	228	275	290	131
85°	31	43	53	55	58	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	733.5	733.5	733.5	733.5	733.5
2.5°	728.3	730.0	733.5	733.5	735.2
5°	726.6	728.3	731.7	731.7	731.7
7.5°	721.4	723.2	726.6	728.3	728.3
10°	716.3	718.0	721.4	723.2	724.9
12.5°	707.7	709.4	714.6	718.0	718.0
15°	699.1	700.8	706.0	709.4	711.1
17.5°	688.8	692.2	697.4	700.8	702.5
20°	675.1	678.5	685.4	690.5	692.2
22.5°	663.0	666.5	673.3	678.5	681.9
25°	649.3	652.7	663.0	666.5	669.9
27.5°	632.1	635.6	644.1	651.0	656.2
30°	614.9	618.4	628.7	637.3	640.7
32.5°	596.0	601.2	613.2	620.1	625.2
35°	575.4	580.6	592.6	604.6	609.8
37.5°	554.8	560.0	572.0	587.5	594.3
40°	530.8	537.6	553.1	573.7	577.2
42.5°	508.4	517.0	530.8	554.8	563.4
45°	482.7	491.3	510.2	535.9	549.7
47.5°	458.6	467.2	487.8	518.7	535.9
50°	429.4	441.5	467.2	503.3	520.5
52.5°	401.9	412.3	446.6	486.1	506.7
55°	372.7	384.8	426.0	468.9	491.3
57.5°	347.0	357.3	403.7	451.8	477.5
60°	314.3	328.1	381.3	432.9	458.6
62.5°	280.0	300.6	359.0	412.3	439.7
65°	247.4	271.4	338.4	391.6	419.1
67.5°	218.1	243.9	312.6	369.3	395.1
70°	183.8	216.4	286.9	341.8	371.0
72.5°	152.9	188.9	257.7	312.6	338.4
75°	122.0	161.5	228.5	274.8	290.3
77.5°	94.5	132.3	195.8	209.6	211.3
80°	70.4	104.8	146.0	147.7	152.9
82.5°	48.1	73.9	94.5	103.1	104.8
85°	30.9	42.9	53.2	55.0	58.4
87.5°	13.7	15.5	18.9	17.2	17.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)