

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: P313012

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-S-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: P313012
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
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-S-CP250-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH 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: 3645.0 lumens
Efficiency: N/A
Efficacy: 110.1 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

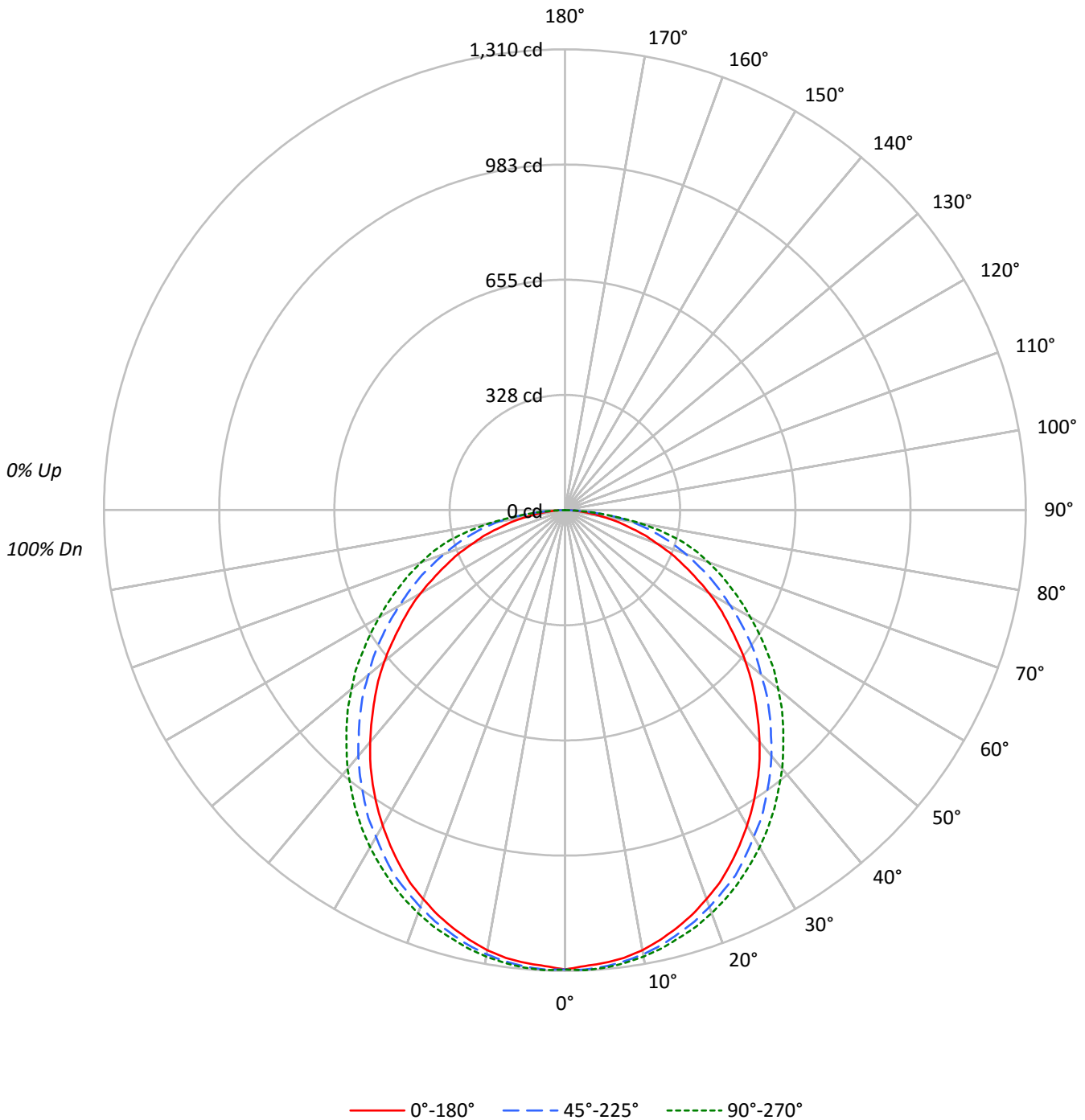
Input Watts (W): 33.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3515	3515	3515
5°	3491	3519	3528
10°	3471	3504	3522
15°	3426	3473	3506
20°	3370	3438	3492
25°	3302	3404	3469
30°	3218	3334	3440
35°	3129	3274	3408
40°	3023	3208	3375
45°	2912	3132	3339
50°	2805	3047	3311
55°	2673	2992	3287
60°	2554	2920	3277
65°	2382	2902	3314
70°	2194	2877	3412
75°	1981	2917	3589
80°	1712	3005	3374
85°	1417	2519	2519



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.5	3.4
10°-20°	351.5	9.6
20°-30°	525.9	14.4
30°-40°	622.9	17.1
40°-50°	634.8	17.4
50°-60°	568.9	15.6
60°-70°	445.4	12.2
70°-80°	287.2	7.9
80°-90°	84.8	2.3
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°	1001.0	27.5
0°-40°	1623.8	44.5
0°-60°	2827.5	77.6
0°-90°	3645.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3645.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1306	1306	1306	1306	1306	
5°	1292	1296	1303	1304	1306	123
15°	1230	1236	1247	1257	1258	347
25°	1112	1122	1146	1162	1168	512
35°	952	964	997	1027	1037	595
45°	765	782	823	866	878	591
55°	570	588	638	682	701	511
65°	374	396	456	500	520	372
75°	190	219	281	328	345	204
85°	46	63	82	82	82	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1306.1	1306.1	1306.1	1306.1	1306.1
2.5°	1297.6	1301.0	1307.8	1309.5	1309.5
5°	1292.5	1295.9	1302.7	1304.4	1306.1
7.5°	1284.0	1285.7	1294.2	1297.6	1299.3
10°	1270.4	1273.8	1282.3	1287.4	1289.1
12.5°	1251.7	1256.8	1267.0	1273.8	1275.5
15°	1229.6	1236.4	1246.6	1256.8	1258.5
17.5°	1205.8	1212.6	1226.2	1238.1	1241.5
20°	1176.9	1185.4	1200.7	1214.3	1219.4
22.5°	1148.0	1154.8	1173.5	1190.5	1195.6
25°	1112.2	1122.4	1146.3	1161.6	1168.4
27.5°	1074.8	1086.7	1110.5	1130.9	1137.8
30°	1035.7	1047.6	1073.1	1098.6	1107.1
32.5°	994.9	1008.5	1039.1	1064.6	1073.1
35°	952.4	964.3	996.6	1027.2	1037.4
37.5°	908.2	918.4	955.8	988.1	998.3
40°	860.5	874.1	913.3	950.7	960.9
42.5°	812.9	828.2	867.3	908.2	918.4
45°	765.3	782.3	823.1	865.6	877.5
47.5°	719.4	733.0	778.9	819.7	836.7
50°	670.1	683.7	727.9	773.8	790.8
52.5°	619.0	637.8	685.4	729.6	750.0
55°	569.7	588.4	637.8	682.0	700.7
57.5°	523.8	539.1	590.1	636.1	654.8
60°	474.5	488.1	542.5	591.8	608.8
62.5°	421.8	442.2	498.3	544.2	564.6
65°	374.1	396.3	455.8	500.0	520.4
67.5°	329.9	350.3	408.2	455.8	477.9
70°	278.9	306.1	365.6	413.3	433.7
72.5°	238.1	261.9	323.1	370.7	392.9
75°	190.5	219.4	280.6	328.2	345.2
77.5°	151.4	180.3	238.1	275.5	284.0
80°	110.5	139.5	193.9	212.6	217.7
82.5°	74.8	102.0	139.5	144.6	146.3
85°	45.9	62.9	81.6	81.6	81.6
87.5°	22.1	25.5	28.9	27.2	27.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)