

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: P312412

Luminaire Tested: **14FCZ2-39-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: P312412
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-40)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-39-UNV-L83050-S-CP250-W2A-U-4000K
Description: 1'X4' 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: 3661.0 lumens
Efficiency: N/A
Efficacy: 107.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.26 / 1.36
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

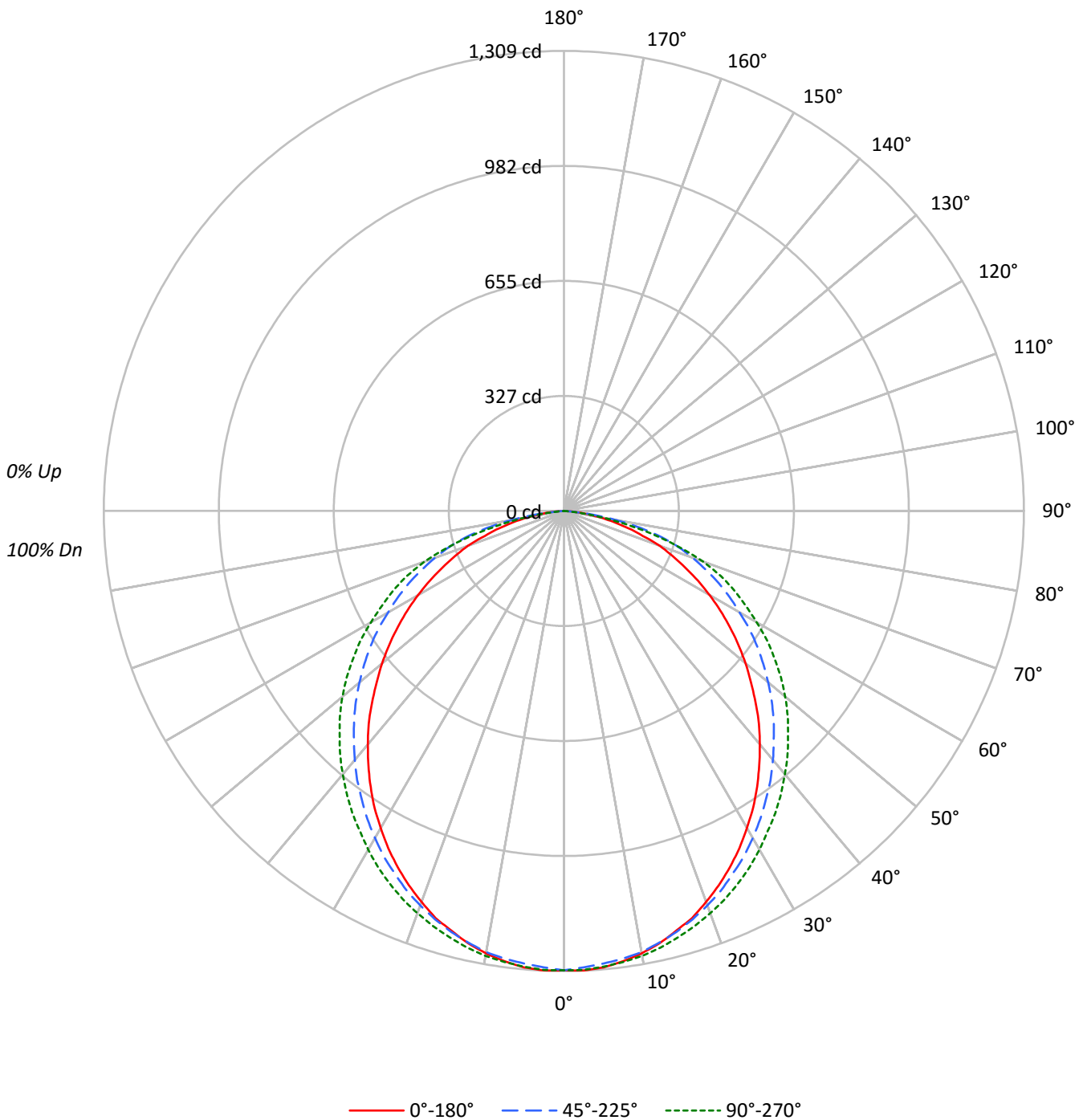
Input Watts (W): 34.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	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	52	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3517	3517	3517
5°	3521	3491	3516
10°	3492	3482	3512
15°	3444	3454	3499
20°	3389	3420	3488
25°	3320	3379	3476
30°	3237	3339	3457
35°	3148	3292	3447
40°	3048	3252	3437
45°	2936	3212	3433
50°	2827	3176	3442
55°	2708	3151	3432
60°	2579	3106	3409
65°	2427	3098	3410
70°	2285	3071	3313
75°	1982	3001	2831
80°	1604	2419	1884
85°	1065	840	562



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.4	3.4
10°-20°	351.2	9.6
20°-30°	526.8	14.4
30°-40°	628.4	17.2
40°-50°	649.6	17.7
50°-60°	593.1	16.2
60°-70°	466.8	12.7
70°-80°	271.7	7.4
80°-90°	50.1	1.4
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°	1001.4	27.4
0°-40°	1629.8	44.5
0°-60°	2872.5	78.5
0°-90°	3661.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3661.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1307	1307	1307	1307	1307	
5°	1303	1300	1292	1303	1302	124
15°	1236	1238	1240	1256	1256	349
25°	1118	1124	1138	1165	1171	515
35°	958	971	1002	1040	1049	599
45°	771	797	844	891	902	596
55°	577	608	672	721	732	516
65°	381	421	486	525	536	379
75°	191	236	289	283	272	203
85°	34	49	27	22	18	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1306.9	1306.9	1306.9	1306.9	1306.9
2.5°	1308.7	1305.1	1299.7	1308.7	1306.9
5°	1303.3	1299.7	1292.4	1303.3	1301.5
7.5°	1292.4	1288.8	1285.1	1296.0	1294.2
10°	1277.9	1276.1	1274.2	1286.9	1285.1
12.5°	1259.7	1259.7	1257.9	1272.4	1272.4
15°	1236.1	1237.9	1239.8	1256.1	1256.1
17.5°	1214.3	1212.5	1218.0	1236.1	1237.9
20°	1183.5	1187.1	1194.4	1216.2	1218.0
22.5°	1152.6	1156.3	1169.0	1190.7	1196.2
25°	1118.1	1123.6	1138.1	1165.3	1170.8
27.5°	1081.8	1089.1	1109.1	1138.1	1143.6
30°	1041.9	1052.8	1074.6	1107.2	1112.7
32.5°	1002.0	1012.9	1040.1	1072.8	1080.0
35°	958.4	971.1	1002.0	1040.1	1049.2
37.5°	913.0	929.4	965.7	1003.8	1014.7
40°	867.6	885.8	925.7	965.7	978.4
42.5°	822.3	840.4	884.0	929.4	942.1
45°	771.4	796.9	844.1	891.2	902.1
47.5°	722.4	749.7	802.3	849.5	864.0
50°	675.2	702.5	758.7	807.7	822.3
52.5°	626.2	655.3	715.2	766.0	778.7
55°	577.2	608.1	671.6	720.6	731.5
57.5°	528.2	560.9	626.2	673.4	686.1
60°	479.2	513.7	577.2	624.4	633.5
62.5°	430.2	466.5	531.8	573.6	582.7
65°	381.2	421.1	486.5	524.6	535.5
67.5°	334.0	373.9	437.5	473.8	482.8
70°	290.4	326.7	390.3	417.5	421.1
72.5°	236.0	281.4	343.1	357.6	348.5
75°	190.6	236.0	288.6	283.2	272.3
77.5°	145.2	190.6	225.1	206.9	192.4
80°	103.5	148.8	156.1	128.9	121.6
82.5°	67.2	103.5	87.1	67.2	54.5
85°	34.5	49.0	27.2	21.8	18.2
87.5°	10.9	7.3	3.6	3.6	1.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)