

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: P309071

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-S-CP125-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: P309071
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-L82765-S-CP125-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (168) 3000K 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: 3649.0 lumens
Efficiency: N/A
Efficacy: 111.2 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

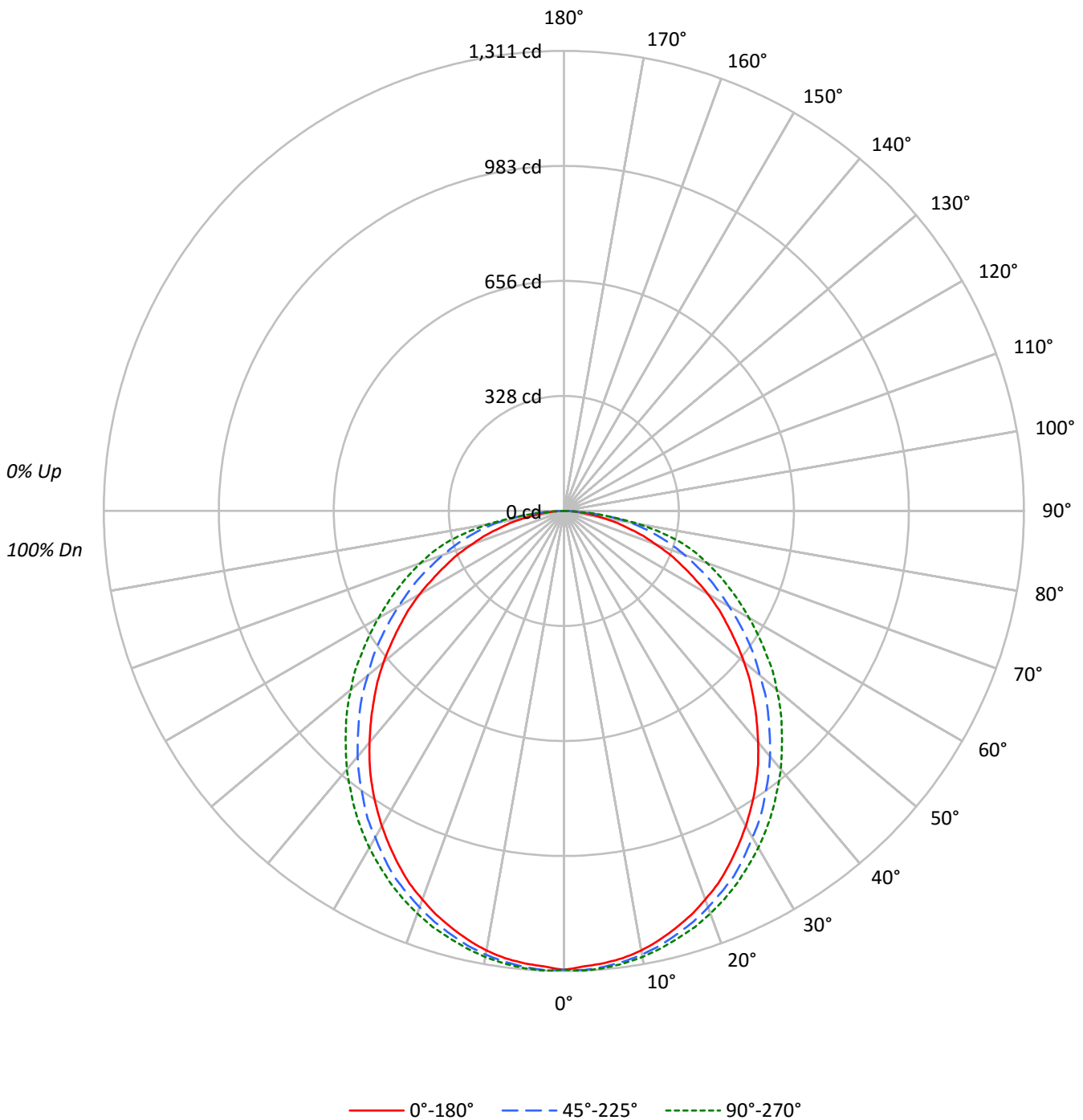
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3519	3519	3519
5°	3495	3523	3532
10°	3475	3508	3526
15°	3429	3477	3510
20°	3374	3442	3496
25°	3306	3407	3473
30°	3222	3338	3444
35°	3132	3278	3412
40°	3026	3212	3379
45°	2915	3136	3343
50°	2808	3051	3314
55°	2676	2996	3291
60°	2556	2923	3280
65°	2385	2905	3317
70°	2197	2880	3415
75°	1983	2921	3593
80°	1715	3008	3377
85°	1420	2523	2523



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.6	3.4
10°-20°	351.9	9.6
20°-30°	526.5	14.4
30°-40°	623.5	17.1
40°-50°	635.5	17.4
50°-60°	569.6	15.6
60°-70°	445.9	12.2
70°-80°	287.5	7.9
80°-90°	84.9	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°	1002.1	27.5
0°-40°	1625.6	44.5
0°-60°	2830.6	77.6
0°-90°	3649.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3649.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1308	1308	1308	1308	1308	
5°	1294	1297	1304	1306	1308	123
15°	1231	1238	1248	1258	1260	347
25°	1114	1124	1148	1163	1170	513
35°	953	965	998	1028	1038	596
45°	766	783	824	867	878	592
55°	570	589	638	683	701	511
65°	375	397	456	500	521	372
75°	191	220	281	329	346	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°	1307.6	1307.6	1307.6	1307.6	1307.6
2.5°	1299.0	1302.4	1309.3	1311.0	1311.0
5°	1293.9	1297.3	1304.1	1305.8	1307.6
7.5°	1285.4	1287.1	1295.6	1299.0	1300.7
10°	1271.8	1275.2	1283.7	1288.8	1290.5
12.5°	1253.1	1258.2	1268.4	1275.2	1276.9
15°	1230.9	1237.7	1248.0	1258.2	1259.9
17.5°	1207.1	1213.9	1227.5	1239.4	1242.9
20°	1178.2	1186.7	1202.0	1215.6	1220.7
22.5°	1149.2	1156.0	1174.8	1191.8	1196.9
25°	1113.5	1123.7	1147.5	1162.8	1169.6
27.5°	1076.0	1087.9	1111.8	1132.2	1139.0
30°	1036.8	1048.8	1074.3	1099.8	1108.4
32.5°	996.0	1009.6	1040.3	1065.8	1074.3
35°	953.4	965.3	997.7	1028.3	1038.5
37.5°	909.2	919.4	956.8	989.2	999.4
40°	861.5	875.1	914.3	951.7	961.9
42.5°	813.8	829.1	868.3	909.2	919.4
45°	766.1	783.2	824.0	866.6	878.5
47.5°	720.2	733.8	779.8	820.6	837.6
50°	670.8	684.4	728.7	774.7	791.7
52.5°	619.7	638.5	686.1	730.4	750.8
55°	570.4	589.1	638.5	682.7	701.4
57.5°	524.4	539.7	590.8	636.7	655.5
60°	475.0	488.6	543.1	592.5	609.5
62.5°	422.2	442.7	498.8	544.8	565.2
65°	374.6	396.7	456.3	500.5	521.0
67.5°	330.3	350.7	408.6	456.3	478.4
70°	279.2	306.5	366.0	413.7	434.1
72.5°	238.4	262.2	323.5	371.2	393.3
75°	190.7	219.6	280.9	328.6	345.6
77.5°	151.5	180.5	238.4	275.8	284.3
80°	110.7	139.6	194.1	212.8	217.9
82.5°	74.9	102.2	139.6	144.7	146.4
85°	46.0	63.0	81.7	81.7	81.7
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)