

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: P309072

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-S-CP125-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: P309072
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-4500K
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: 3713.0 lumens
Efficiency: N/A
Efficacy: 112.5 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

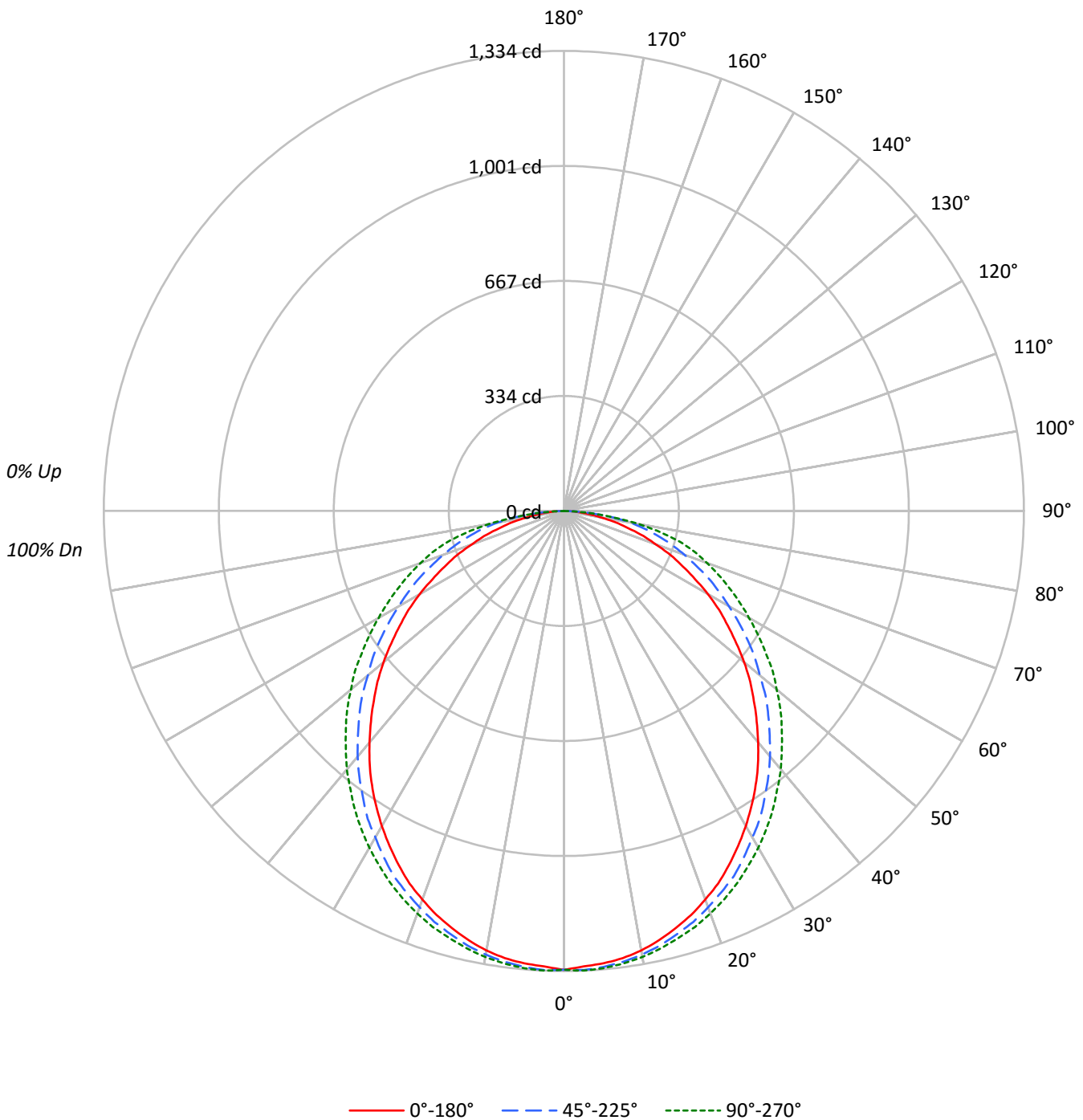
Input Watts (W): 33
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3580	3580	3580
5°	3556	3585	3594
10°	3536	3569	3588
15°	3489	3538	3572
20°	3433	3503	3557
25°	3364	3467	3534
30°	3278	3397	3504
35°	3187	3335	3472
40°	3079	3268	3438
45°	2967	3191	3402
50°	2858	3104	3373
55°	2723	3048	3348
60°	2601	2974	3338
65°	2427	2956	3375
70°	2235	2931	3476
75°	2017	2972	3657
80°	1745	3061	3436
85°	1445	2569	2569



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.8	3.4
10°-20°	358.1	9.6
20°-30°	535.8	14.4
30°-40°	634.5	17.1
40°-50°	646.6	17.4
50°-60°	579.5	15.6
60°-70°	453.7	12.2
70°-80°	292.6	7.9
80°-90°	86.4	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°	1019.6	27.5
0°-40°	1654.1	44.5
0°-60°	2880.3	77.6
0°-90°	3713.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3713.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1330	1330	1330	1330	1330	
5°	1317	1320	1327	1329	1330	125
15°	1252	1260	1270	1280	1282	353
25°	1133	1143	1168	1183	1190	522
35°	970	982	1015	1046	1057	606
45°	780	797	838	882	894	602
55°	580	599	650	695	714	520
65°	381	404	464	509	530	379
75°	194	224	286	334	352	208
85°	47	64	83	83	83	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1330.5	1330.5	1330.5	1330.5	1330.5
2.5°	1321.8	1325.3	1332.2	1333.9	1333.9
5°	1316.6	1320.1	1327.0	1328.8	1330.5
7.5°	1308.0	1309.7	1318.4	1321.8	1323.6
10°	1294.1	1297.6	1306.2	1311.4	1313.2
12.5°	1275.0	1280.2	1290.6	1297.6	1299.3
15°	1252.5	1259.5	1269.8	1280.2	1282.0
17.5°	1228.3	1235.2	1249.1	1261.2	1264.7
20°	1198.8	1207.5	1223.1	1236.9	1242.1
22.5°	1169.4	1176.3	1195.4	1212.7	1217.9
25°	1133.0	1143.4	1167.6	1183.2	1190.2
27.5°	1094.9	1107.0	1131.3	1152.0	1159.0
30°	1055.0	1067.2	1093.1	1119.1	1127.8
32.5°	1013.5	1027.3	1058.5	1084.5	1093.1
35°	970.1	982.3	1015.2	1046.4	1056.8
37.5°	925.1	935.5	973.6	1006.5	1016.9
40°	876.6	890.5	930.3	968.4	978.8
42.5°	828.1	843.7	883.5	925.1	935.5
45°	779.6	796.9	838.5	881.8	893.9
47.5°	732.8	746.7	793.4	835.0	852.3
50°	682.6	696.4	741.5	788.2	805.6
52.5°	630.6	649.7	698.2	743.2	764.0
55°	580.4	599.4	649.7	694.7	713.7
57.5°	533.6	549.2	601.1	647.9	667.0
60°	483.3	497.2	552.6	602.9	620.2
62.5°	429.6	450.4	507.6	554.4	575.2
65°	381.1	403.6	464.3	509.3	530.1
67.5°	336.1	356.9	415.8	464.3	486.8
70°	284.1	311.8	372.5	421.0	441.8
72.5°	242.5	266.8	329.2	377.7	400.2
75°	194.0	223.5	285.8	334.4	351.7
77.5°	154.2	183.6	242.5	280.6	289.3
80°	112.6	142.1	197.5	216.6	221.7
82.5°	76.2	103.9	142.1	147.3	149.0
85°	46.8	64.1	83.2	83.2	83.2
87.5°	22.5	26.0	29.5	27.7	27.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)