

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: P309094

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-S-CP250-W2A-U-6500K**

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: P309094
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-CP250-W2A-U-6500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.250" 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: 3629.0 lumens
Efficiency: N/A
Efficacy: 107.4 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

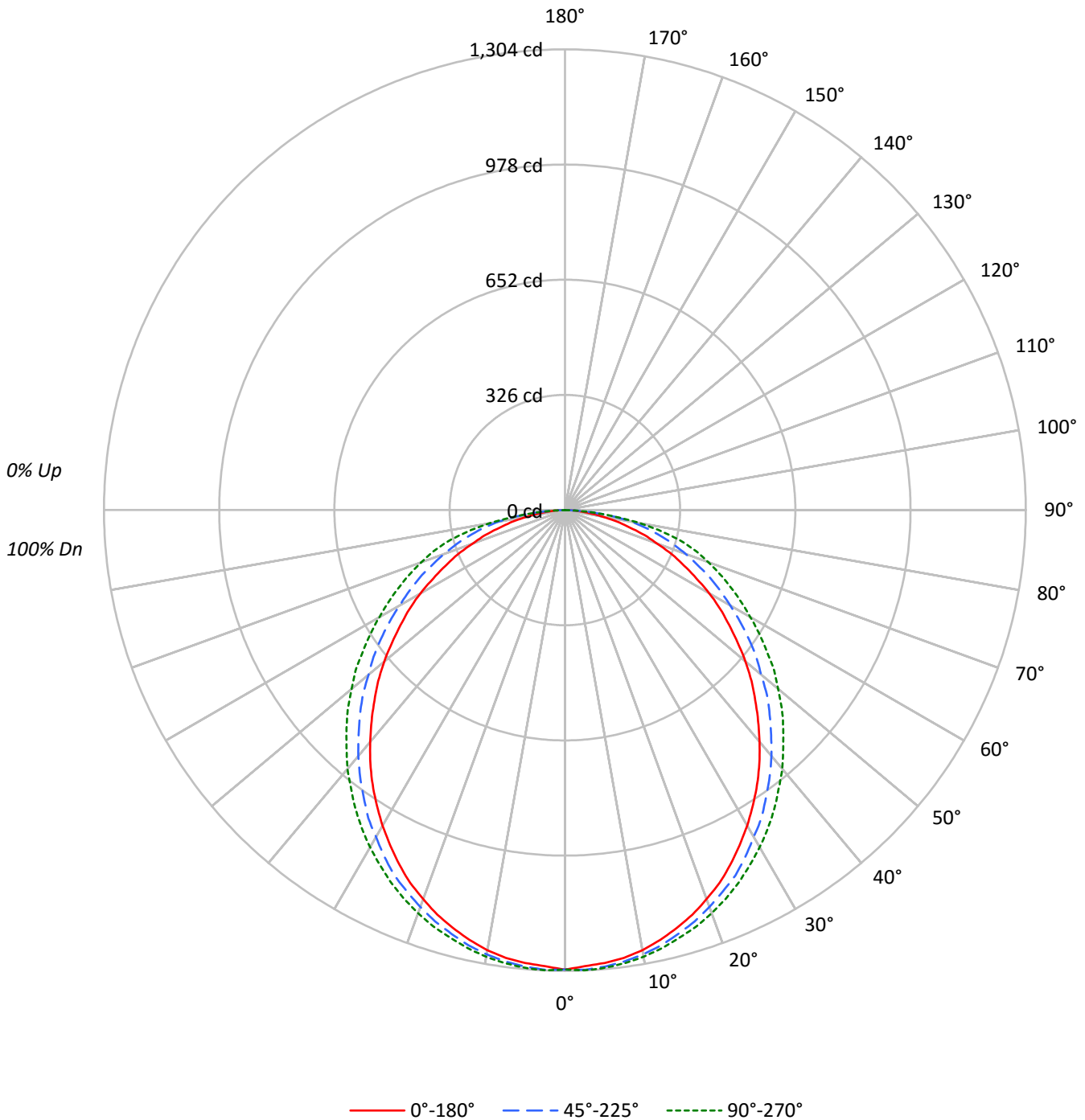
Input Watts (W): 33.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3499	3499	3499
5°	3476	3504	3513
10°	3456	3489	3507
15°	3411	3458	3491
20°	3355	3423	3477
25°	3288	3388	3454
30°	3204	3320	3425
35°	3115	3259	3393
40°	3010	3194	3361
45°	2900	3119	3325
50°	2793	3034	3296
55°	2661	2979	3273
60°	2542	2907	3263
65°	2372	2890	3299
70°	2185	2864	3397
75°	1971	2905	3573
80°	1706	2991	3358
85°	1411	2510	2510



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.0	3.4
10°-20°	350.0	9.6
20°-30°	523.6	14.4
30°-40°	620.1	17.1
40°-50°	632.0	17.4
50°-60°	566.4	15.6
60°-70°	443.5	12.2
70°-80°	286.0	7.9
80°-90°	84.5	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°	996.6	27.5
0°-40°	1616.7	44.5
0°-60°	2815.1	77.6
0°-90°	3629.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3629.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1300	1300	1300	1300	1300	
5°	1287	1290	1297	1299	1300	122
15°	1224	1231	1241	1251	1253	345
25°	1107	1118	1141	1156	1163	510
35°	948	960	992	1023	1033	593
45°	762	779	820	862	874	588
55°	567	586	635	679	698	509
65°	372	394	454	498	518	370
75°	190	218	279	327	344	203
85°	46	63	81	81	81	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1300.4	1300.4	1300.4	1300.4	1300.4
2.5°	1291.9	1295.3	1302.1	1303.8	1303.8
5°	1286.8	1290.2	1297.0	1298.7	1300.4
7.5°	1278.4	1280.1	1288.5	1291.9	1293.6
10°	1264.8	1268.2	1276.7	1281.8	1283.5
12.5°	1246.2	1251.3	1261.4	1268.2	1269.9
15°	1224.2	1231.0	1241.1	1251.3	1253.0
17.5°	1200.5	1207.3	1220.8	1232.7	1236.0
20°	1171.7	1180.2	1195.4	1209.0	1214.0
22.5°	1142.9	1149.7	1168.3	1185.2	1190.3
25°	1107.4	1117.5	1141.2	1156.5	1163.2
27.5°	1070.1	1082.0	1105.7	1126.0	1132.8
30°	1031.2	1043.0	1068.4	1093.8	1102.3
32.5°	990.5	1004.1	1034.6	1059.9	1068.4
35°	948.2	960.0	992.2	1022.7	1032.9
37.5°	904.2	914.3	951.6	983.8	993.9
40°	856.8	870.3	909.3	946.5	956.7
42.5°	809.4	824.6	863.5	904.2	914.3
45°	761.9	778.9	819.5	861.8	873.7
47.5°	716.2	729.8	775.5	816.1	833.1
50°	667.1	680.7	724.7	770.4	787.3
52.5°	616.3	635.0	682.4	726.4	746.7
55°	567.2	585.9	635.0	679.0	697.6
57.5°	521.5	536.7	587.5	633.3	651.9
60°	472.4	486.0	540.1	589.2	606.2
62.5°	419.9	440.2	496.1	541.8	562.1
65°	372.5	394.5	453.8	497.8	518.1
67.5°	328.5	348.8	406.4	453.8	475.8
70°	277.7	304.8	364.0	411.4	431.8
72.5°	237.0	260.8	321.7	369.1	391.1
75°	189.6	218.4	279.4	326.8	343.7
77.5°	150.7	179.5	237.0	274.3	282.8
80°	110.1	138.8	193.0	211.7	216.7
82.5°	74.5	101.6	138.8	143.9	145.6
85°	45.7	62.6	81.3	81.3	81.3
87.5°	22.0	25.4	28.8	27.1	27.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)