

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: P309052

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-S-CA08-W2A-U-3500K**

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: P309052
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-CA08-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC 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: 3654.0 lumens
Efficiency: N/A
Efficacy: 112.1 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

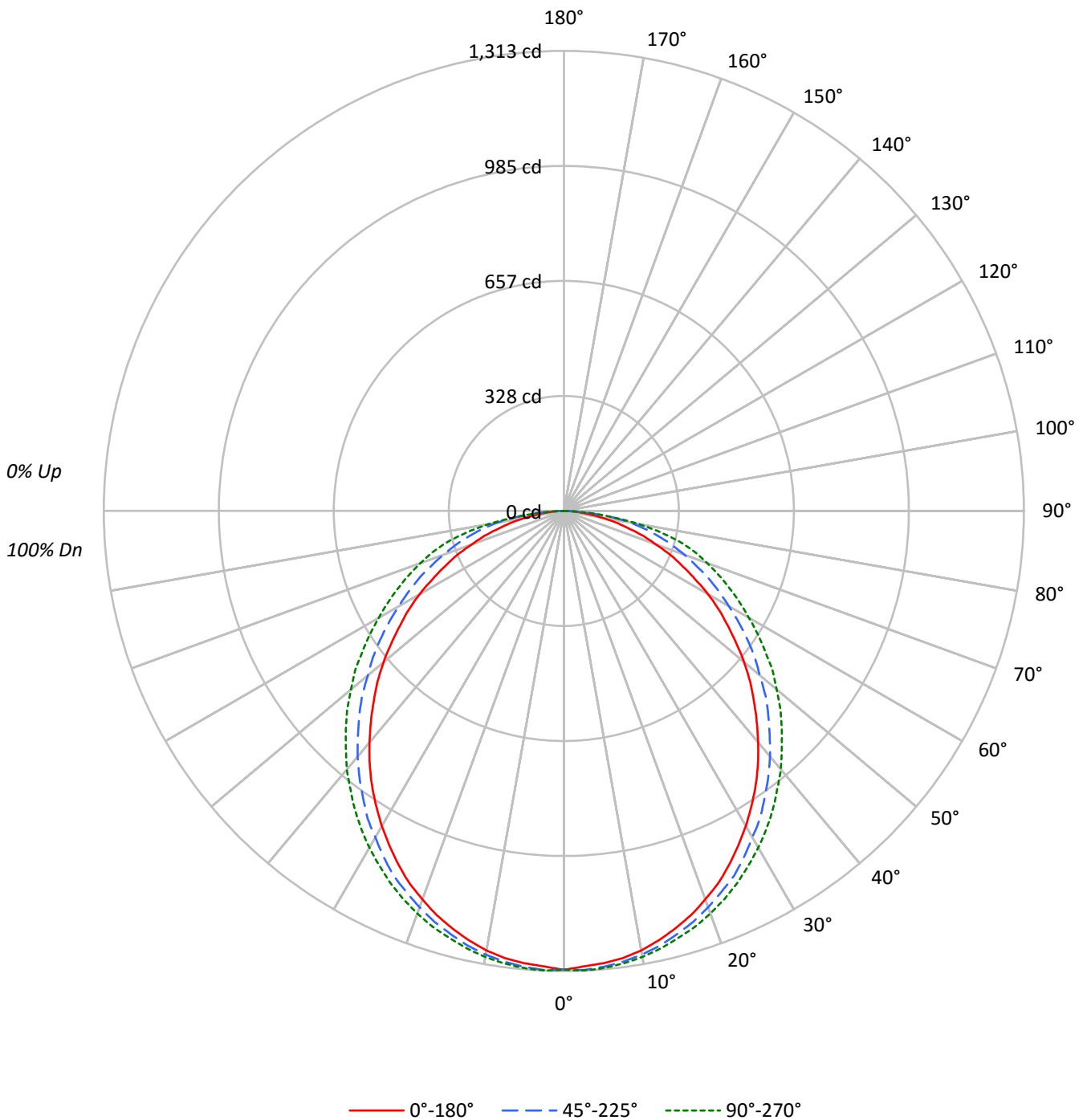
Input Watts (W): 32.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3523	3523	3523
5°	3500	3528	3537
10°	3480	3513	3531
15°	3434	3482	3515
20°	3379	3447	3501
25°	3311	3412	3477
30°	3226	3343	3449
35°	3136	3282	3416
40°	3031	3216	3384
45°	2920	3140	3348
50°	2812	3055	3319
55°	2679	2999	3295
60°	2560	2927	3285
65°	2388	2909	3322
70°	2200	2884	3420
75°	1985	2925	3598
80°	1717	3013	3381
85°	1420	2526	2526



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.8	3.4
10°-20°	352.4	9.6
20°-30°	527.2	14.4
30°-40°	624.4	17.1
40°-50°	636.3	17.4
50°-60°	570.3	15.6
60°-70°	446.5	12.2
70°-80°	287.9	7.9
80°-90°	85.1	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°	1003.4	27.5
0°-40°	1627.8	44.5
0°-60°	2834.5	77.6
0°-90°	3654.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3654.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1309	1309	1309	1309	1309	
5°	1296	1299	1306	1308	1309	123
15°	1233	1239	1250	1260	1262	348
25°	1115	1125	1149	1164	1171	513
35°	955	967	999	1030	1040	597
45°	767	784	825	868	880	592
55°	571	590	639	684	702	512
65°	375	397	457	501	522	373
75°	191	220	281	329	346	205
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°	1309.3	1309.3	1309.3	1309.3	1309.3
2.5°	1300.8	1304.2	1311.0	1312.8	1312.8
5°	1295.7	1299.1	1305.9	1307.6	1309.3
7.5°	1287.2	1288.9	1297.4	1300.8	1302.5
10°	1273.5	1276.9	1285.5	1290.6	1292.3
12.5°	1254.8	1259.9	1270.1	1276.9	1278.7
15°	1232.6	1239.4	1249.7	1259.9	1261.6
17.5°	1208.8	1215.6	1229.2	1241.1	1244.6
20°	1179.8	1188.3	1203.6	1217.3	1222.4
22.5°	1150.8	1157.6	1176.4	1193.4	1198.5
25°	1115.0	1125.2	1149.1	1164.4	1171.2
27.5°	1077.5	1089.4	1113.3	1133.7	1140.6
30°	1038.3	1050.2	1075.8	1101.3	1109.9
32.5°	997.4	1011.0	1041.7	1067.3	1075.8
35°	954.7	966.7	999.1	1029.7	1040.0
37.5°	910.4	920.6	958.1	990.5	1000.8
40°	862.7	876.3	915.5	953.0	963.3
42.5°	814.9	830.3	869.5	910.4	920.6
45°	767.2	784.2	825.2	867.8	879.7
47.5°	721.2	734.8	780.8	821.7	838.8
50°	671.7	685.4	729.7	775.7	792.8
52.5°	620.6	639.3	687.1	731.4	751.8
55°	571.1	589.9	639.3	683.7	702.4
57.5°	525.1	540.4	591.6	637.6	656.4
60°	475.7	489.3	543.9	593.3	610.3
62.5°	422.8	443.3	499.5	545.6	566.0
65°	375.1	397.2	456.9	501.2	521.7
67.5°	330.7	351.2	409.2	456.9	479.1
70°	279.6	306.9	366.5	414.3	434.7
72.5°	238.7	262.6	323.9	371.7	393.8
75°	190.9	219.9	281.3	329.0	346.1
77.5°	151.7	180.7	238.7	276.2	284.7
80°	110.8	139.8	194.4	213.1	218.2
82.5°	75.0	102.3	139.8	144.9	146.6
85°	46.0	63.1	81.8	81.8	81.8
87.5°	22.2	25.6	29.0	27.3	27.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)