

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: P309062

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-S-CA125-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: P309062
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-CA125-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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: 3721.0 lumens
Efficiency: N/A
Efficacy: 113.4 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

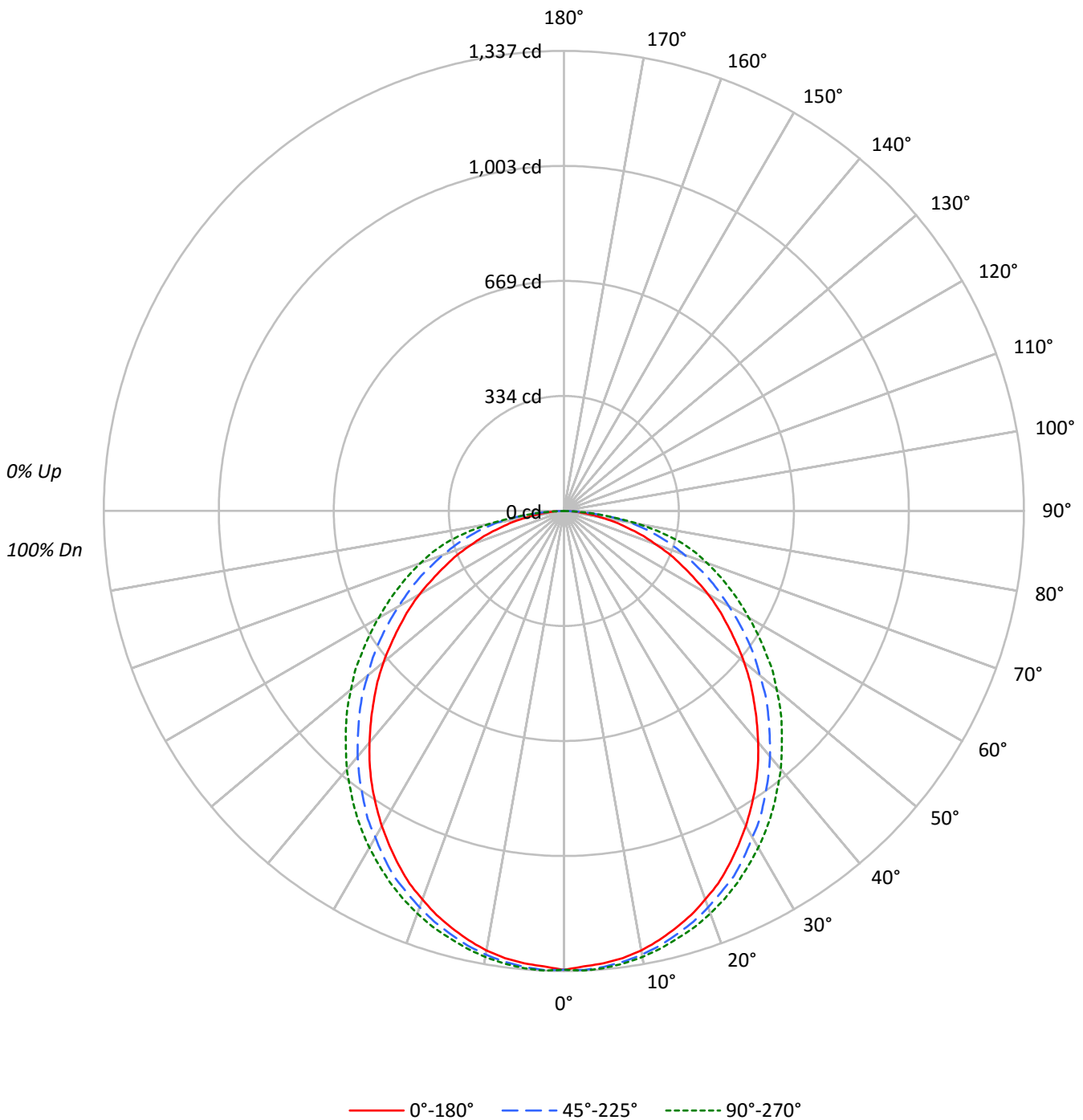
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3588	3588	3588
5°	3564	3592	3602
10°	3544	3577	3596
15°	3497	3545	3579
20°	3440	3510	3565
25°	3371	3475	3541
30°	3285	3404	3512
35°	3194	3342	3479
40°	3086	3275	3446
45°	2973	3198	3409
50°	2864	3111	3380
55°	2729	3054	3356
60°	2607	2981	3345
65°	2432	2963	3383
70°	2240	2937	3483
75°	2021	2979	3664
80°	1748	3067	3443
85°	1448	2572	2572



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.1	3.4
10°-20°	358.8	9.6
20°-30°	536.9	14.4
30°-40°	635.8	17.1
40°-50°	648.0	17.4
50°-60°	580.8	15.6
60°-70°	454.7	12.2
70°-80°	293.2	7.9
80°-90°	86.6	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°	1021.8	27.5
0°-40°	1657.7	44.5
0°-60°	2886.5	77.6
0°-90°	3721.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3721.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1333	1333	1333	1333	1333	
5°	1320	1323	1330	1332	1333	125
15°	1255	1262	1273	1283	1285	354
25°	1135	1146	1170	1186	1193	523
35°	972	984	1017	1049	1059	608
45°	781	799	840	884	896	603
55°	582	601	651	696	715	521
65°	382	404	465	510	531	379
75°	194	224	286	335	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°	1333.4	1333.4	1333.4	1333.4	1333.4
2.5°	1324.7	1328.1	1335.1	1336.8	1336.8
5°	1319.5	1322.9	1329.9	1331.6	1333.4
7.5°	1310.8	1312.5	1321.2	1324.7	1326.4
10°	1296.9	1300.4	1309.0	1314.3	1316.0
12.5°	1277.8	1283.0	1293.4	1300.4	1302.1
15°	1255.2	1262.2	1272.6	1283.0	1284.7
17.5°	1230.9	1237.9	1251.8	1263.9	1267.4
20°	1201.4	1210.1	1225.7	1239.6	1244.8
22.5°	1171.9	1178.8	1197.9	1215.3	1220.5
25°	1135.4	1145.8	1170.2	1185.8	1192.7
27.5°	1097.2	1109.4	1133.7	1154.5	1161.5
30°	1057.3	1069.5	1095.5	1121.5	1130.2
32.5°	1015.6	1029.5	1060.8	1086.8	1095.5
35°	972.2	984.4	1017.4	1048.6	1059.0
37.5°	927.1	937.5	975.7	1008.7	1019.1
40°	878.5	892.4	932.3	970.5	980.9
42.5°	829.9	845.5	885.4	927.1	937.5
45°	781.3	798.6	840.3	883.7	895.8
47.5°	734.4	748.3	795.1	836.8	854.2
50°	684.0	697.9	743.1	789.9	807.3
52.5°	632.0	651.0	699.7	744.8	765.6
55°	581.6	600.7	651.0	696.2	715.3
57.5°	534.7	550.4	602.4	649.3	668.4
60°	484.4	498.3	553.8	604.2	621.5
62.5°	430.6	451.4	508.7	555.6	576.4
65°	381.9	404.5	465.3	510.4	531.3
67.5°	336.8	357.6	416.7	465.3	487.9
70°	284.7	312.5	373.3	421.9	442.7
72.5°	243.1	267.4	329.9	378.5	401.0
75°	194.4	224.0	286.5	335.1	352.4
77.5°	154.5	184.0	243.1	281.3	289.9
80°	112.8	142.4	197.9	217.0	222.2
82.5°	76.4	104.2	142.4	147.6	149.3
85°	46.9	64.2	83.3	83.3	83.3
87.5°	22.6	26.0	29.5	27.8	27.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)