

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: P313002

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-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: P313002
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-L83050-S-CP125-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (168) 4000K 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: 3838.0 lumens
Efficiency: N/A
Efficacy: 116.0 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

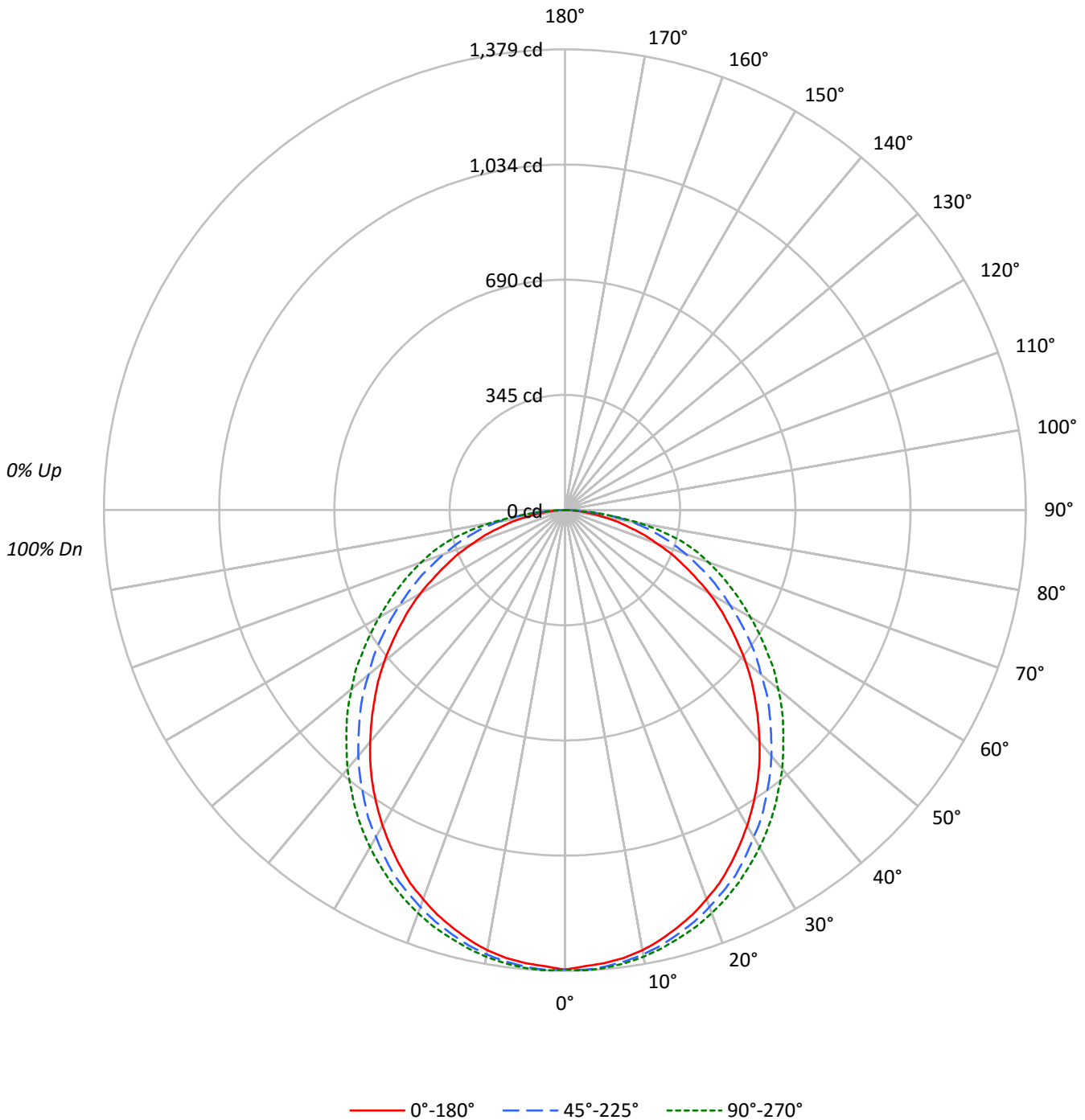
Input Watts (W): 33.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3701	3701	3701
5°	3676	3705	3715
10°	3655	3689	3709
15°	3607	3657	3692
20°	3549	3621	3677
25°	3477	3583	3653
30°	3389	3511	3622
35°	3294	3447	3588
40°	3183	3378	3554
45°	3067	3298	3516
50°	2954	3208	3486
55°	2814	3150	3461
60°	2689	3074	3450
65°	2509	3056	3489
70°	2311	3029	3592
75°	2086	3072	3779
80°	1804	3163	3552
85°	1491	2655	2655



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.1	3.4
10°-20°	370.1	9.6
20°-30°	553.8	14.4
30°-40°	655.8	17.1
40°-50°	668.4	17.4
50°-60°	599.0	15.6
60°-70°	469.0	12.2
70°-80°	302.4	7.9
80°-90°	89.3	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°	1054.0	27.5
0°-40°	1709.8	44.5
0°-60°	2977.2	77.6
0°-90°	3838.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3838.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1375	1375	1375	1375	1375	
5°	1361	1364	1372	1374	1375	129
15°	1295	1302	1313	1323	1325	365
25°	1171	1182	1207	1223	1230	539
35°	1003	1015	1049	1082	1092	627
45°	806	824	867	912	924	622
55°	600	620	672	718	738	538
65°	394	417	480	526	548	391
75°	201	231	296	346	364	215
85°	48	66	86	86	86	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1375.3	1375.3	1375.3	1375.3	1375.3
2.5°	1366.3	1369.9	1377.1	1378.9	1378.9
5°	1360.9	1364.5	1371.7	1373.5	1375.3
7.5°	1352.0	1353.8	1362.7	1366.3	1368.1
10°	1337.7	1341.3	1350.2	1355.6	1357.4
12.5°	1318.0	1323.3	1334.1	1341.3	1343.0
15°	1294.7	1301.9	1312.6	1323.3	1325.1
17.5°	1269.6	1276.8	1291.1	1303.6	1307.2
20°	1239.2	1248.1	1264.3	1278.6	1283.9
22.5°	1208.7	1215.9	1235.6	1253.5	1258.9
25°	1171.1	1181.9	1206.9	1223.1	1230.2
27.5°	1131.7	1144.3	1169.3	1190.8	1198.0
30°	1090.6	1103.1	1129.9	1156.8	1165.8
32.5°	1047.6	1061.9	1094.1	1121.0	1129.9
35°	1002.8	1015.3	1049.4	1081.6	1092.3
37.5°	956.2	967.0	1006.4	1040.4	1051.2
40°	906.1	920.4	961.6	1001.0	1011.8
42.5°	856.0	872.1	913.3	956.2	967.0
45°	805.8	823.7	866.7	911.5	924.0
47.5°	757.5	771.8	820.2	863.1	881.0
50°	705.5	719.9	766.4	814.8	832.7
52.5°	651.8	671.5	721.7	768.2	789.7
55°	599.9	619.6	671.5	718.1	737.8
57.5°	551.5	567.7	621.4	669.7	689.4
60°	499.6	513.9	571.2	623.2	641.1
62.5°	444.1	465.6	524.7	573.0	594.5
65°	394.0	417.2	479.9	526.5	548.0
67.5°	347.4	368.9	429.8	479.9	503.2
70°	293.7	322.3	385.0	435.1	456.6
72.5°	250.7	275.8	340.2	390.4	413.7
75°	200.6	231.0	295.5	345.6	363.5
77.5°	159.4	189.8	250.7	290.1	299.1
80°	116.4	146.8	204.1	223.8	229.2
82.5°	78.8	107.4	146.8	152.2	154.0
85°	48.3	66.3	86.0	86.0	86.0
87.5°	23.3	26.9	30.4	28.7	28.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)