

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: P313028

Luminaire Tested: **22FCZ2-44HE-UNV-L83050-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: P313028
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: 22FCZ2-44HE-UNV-L83050-S-CP125-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (168) 4500K 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: 4347.0 lumens
Efficiency: N/A
Efficacy: 111.5 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

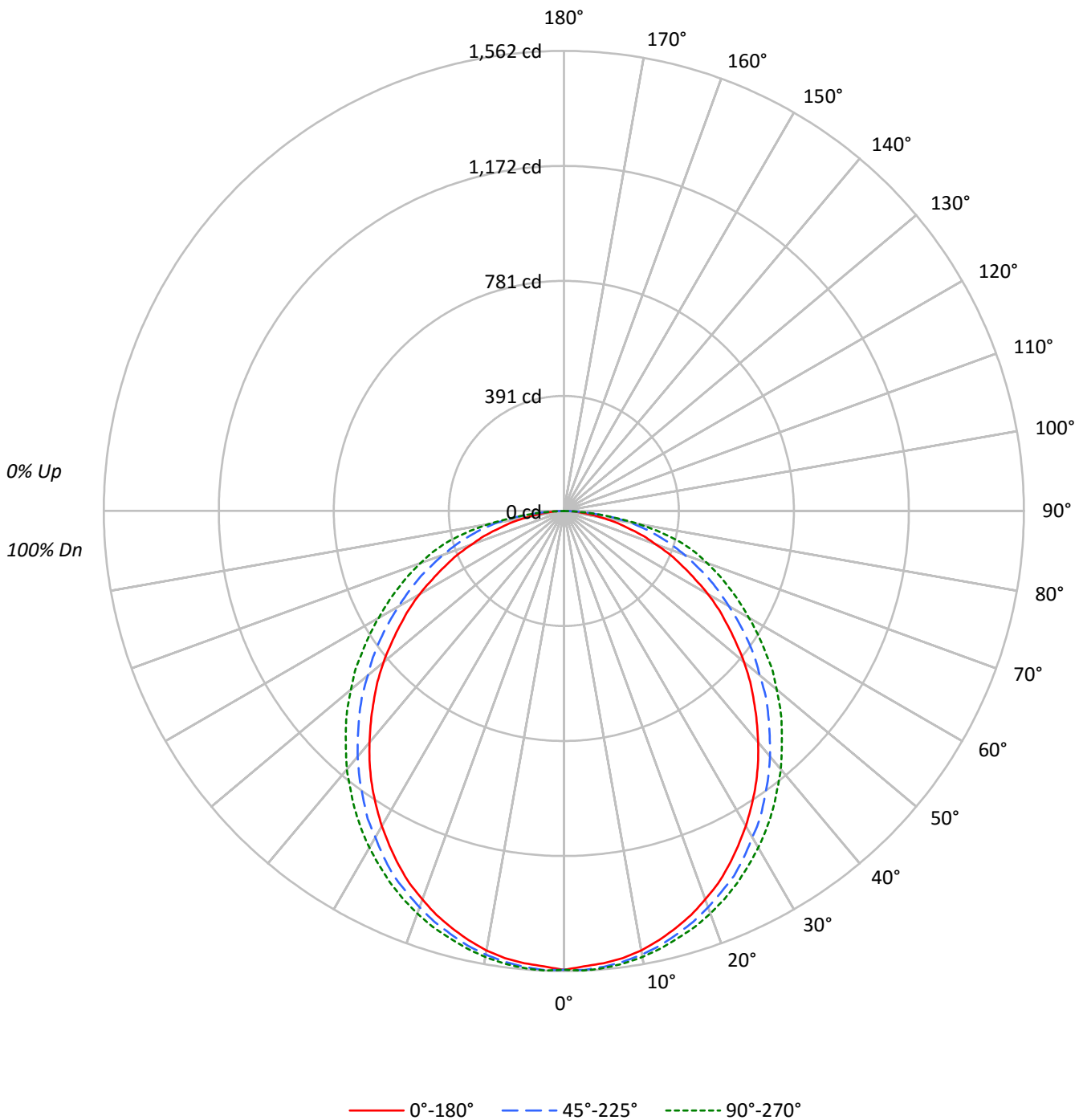
Input Watts (W): 39
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4192	4192	4192
5°	4164	4197	4208
10°	4140	4179	4201
15°	4085	4142	4181
20°	4019	4101	4164
25°	3938	4059	4137
30°	3838	3977	4103
35°	3731	3904	4064
40°	3605	3826	4025
45°	3473	3736	3983
50°	3345	3634	3948
55°	3188	3568	3920
60°	3046	3482	3908
65°	2841	3461	3952
70°	2617	3431	4069
75°	2362	3480	4281
80°	2042	3583	4023
85°	1692	3007	3007



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.3	3.4
10°-20°	419.2	9.6
20°-30°	627.2	14.4
30°-40°	742.8	17.1
40°-50°	757.0	17.4
50°-60°	678.5	15.6
60°-70°	531.2	12.2
70°-80°	342.5	7.9
80°-90°	101.2	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°	1193.7	27.5
0°-40°	1936.6	44.5
0°-60°	3372.1	77.6
0°-90°	4347.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4347.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1558	1558	1558	1558	1558	
5°	1541	1546	1554	1556	1558	146
15°	1466	1474	1487	1499	1501	413
25°	1326	1339	1367	1385	1393	611
35°	1136	1150	1188	1225	1237	710
45°	913	933	982	1032	1047	705
55°	680	702	761	813	836	609
65°	446	473	544	596	621	443
75°	227	262	335	391	412	244
85°	55	75	97	97	97	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1557.7	1557.7	1557.7	1557.7	1557.7
2.5°	1547.5	1551.6	1559.7	1561.7	1561.7
5°	1541.4	1545.5	1553.6	1555.6	1557.7
7.5°	1531.3	1533.3	1543.5	1547.5	1549.6
10°	1515.1	1519.1	1529.3	1535.4	1537.4
12.5°	1492.8	1498.8	1511.0	1519.1	1521.2
15°	1466.4	1474.5	1486.7	1498.8	1500.9
17.5°	1438.0	1446.1	1462.3	1476.5	1480.6
20°	1403.5	1413.7	1431.9	1448.1	1454.2
22.5°	1369.0	1377.2	1399.5	1419.7	1425.8
25°	1326.4	1338.6	1367.0	1385.3	1393.4
27.5°	1281.8	1296.0	1324.4	1348.8	1356.9
30°	1235.2	1249.4	1279.8	1310.2	1320.4
32.5°	1186.5	1202.7	1239.2	1269.7	1279.8
35°	1135.8	1150.0	1188.5	1225.0	1237.2
37.5°	1083.1	1095.2	1139.9	1178.4	1190.6
40°	1026.3	1042.5	1089.1	1133.8	1145.9
42.5°	969.5	987.7	1034.4	1083.1	1095.2
45°	912.7	933.0	981.7	1032.4	1046.6
47.5°	857.9	874.2	928.9	977.6	997.9
50°	799.1	815.3	868.1	922.8	943.1
52.5°	738.3	760.6	817.4	870.1	894.4
55°	679.5	701.8	760.6	813.3	835.6
57.5°	624.7	642.9	703.8	758.6	780.9
60°	565.9	582.1	647.0	705.8	726.1
62.5°	503.0	527.3	594.3	649.0	673.4
65°	446.2	472.6	543.6	596.3	620.6
67.5°	393.5	417.8	486.8	543.6	569.9
70°	332.6	365.1	436.1	492.9	517.2
72.5°	283.9	312.3	385.4	442.1	468.5
75°	227.2	261.6	334.7	391.4	411.7
77.5°	180.5	215.0	283.9	328.6	338.7
80°	131.8	166.3	231.2	253.5	259.6
82.5°	89.2	121.7	166.3	172.4	174.4
85°	54.8	75.0	97.4	97.4	97.4
87.5°	26.4	30.4	34.5	32.5	32.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)