

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: P309102

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-S-CA08-W2A-U-5700K**

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: P309102
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-L82765-S-CA08-W2A-U-5700K
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: 4375.0 lumens
Efficiency: N/A
Efficacy: 114.5 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

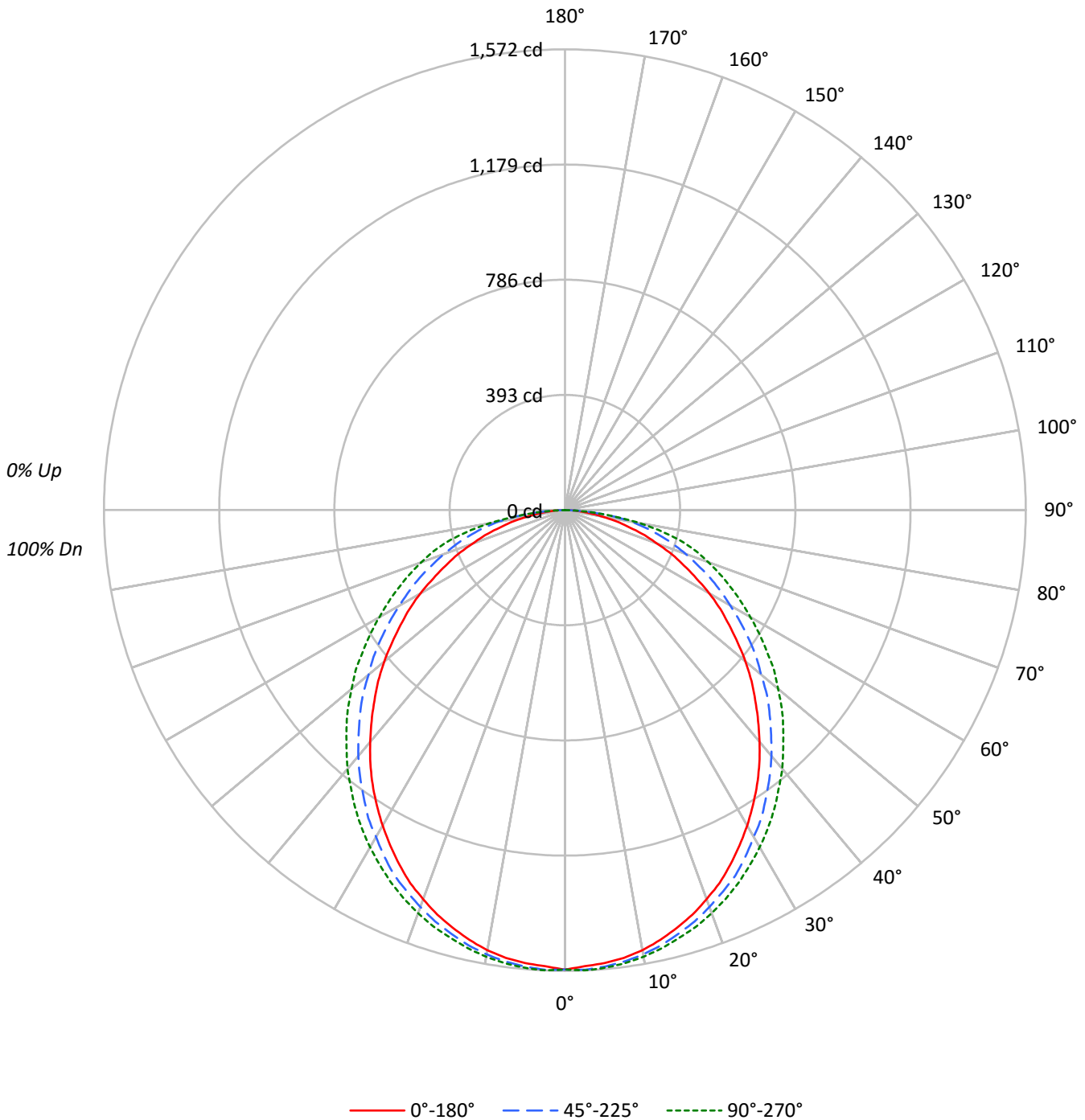
Input Watts (W): 38.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4219	4219	4219
5°	4191	4224	4235
10°	4167	4206	4228
15°	4111	4169	4208
20°	4045	4127	4191
25°	3964	4085	4164
30°	3863	4002	4129
35°	3755	3930	4091
40°	3628	3851	4051
45°	3496	3760	4008
50°	3367	3658	3974
55°	3208	3591	3946
60°	3065	3505	3933
65°	2860	3484	3977
70°	2634	3453	4095
75°	2377	3502	4309
80°	2056	3606	4049
85°	1701	3026	3026



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.3	3.4
10°-20°	421.9	9.6
20°-30°	631.3	14.4
30°-40°	747.6	17.1
40°-50°	761.9	17.4
50°-60°	682.9	15.6
60°-70°	534.6	12.2
70°-80°	344.8	7.9
80°-90°	101.8	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°	1201.4	27.5
0°-40°	1949.0	44.5
0°-60°	3393.8	77.6
0°-90°	4375.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4375.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1568	1568	1568	1568	1568	
5°	1551	1556	1564	1566	1568	147
15°	1476	1484	1496	1508	1510	416
25°	1335	1347	1376	1394	1402	615
35°	1143	1157	1196	1233	1245	714
45°	919	939	988	1039	1053	709
55°	684	706	766	819	841	613
65°	449	476	547	600	625	446
75°	229	263	337	394	414	245
85°	55	76	98	98	98	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1567.7	1567.7	1567.7	1567.7	1567.7
2.5°	1557.5	1561.6	1569.7	1571.8	1571.8
5°	1551.4	1555.5	1563.6	1565.7	1567.7
7.5°	1541.2	1543.2	1553.4	1557.5	1559.5
10°	1524.8	1528.9	1539.1	1545.2	1547.3
12.5°	1502.4	1508.5	1520.7	1528.9	1531.0
15°	1475.8	1484.0	1496.3	1508.5	1510.5
17.5°	1447.3	1455.4	1471.8	1486.0	1490.1
20°	1412.6	1422.8	1441.1	1457.5	1463.6
22.5°	1377.9	1386.0	1408.5	1428.9	1435.0
25°	1335.0	1347.2	1375.8	1394.2	1402.4
27.5°	1290.1	1304.4	1333.0	1357.4	1365.6
30°	1243.1	1257.4	1288.0	1318.7	1328.9
32.5°	1194.1	1210.5	1247.2	1277.8	1288.0
35°	1143.1	1157.4	1196.2	1232.9	1245.2
37.5°	1090.0	1102.3	1147.2	1186.0	1198.2
40°	1032.9	1049.2	1096.2	1141.1	1153.3
42.5°	975.7	994.1	1041.1	1090.0	1102.3
45°	918.6	939.0	988.0	1039.0	1053.3
47.5°	863.5	879.8	934.9	983.9	1004.3
50°	804.3	820.6	873.7	928.8	949.2
52.5°	743.0	765.5	822.6	875.7	900.2
55°	683.8	706.3	765.5	818.6	841.0
57.5°	628.7	647.1	708.3	763.4	785.9
60°	569.5	585.8	651.2	710.4	730.8
62.5°	506.2	530.7	598.1	653.2	677.7
65°	449.1	475.6	547.1	600.1	624.6
67.5°	396.0	420.5	489.9	547.1	573.6
70°	334.8	367.4	438.9	496.0	520.5
72.5°	285.8	314.4	387.8	445.0	471.5
75°	228.6	263.3	336.8	394.0	414.4
77.5°	181.7	216.4	285.8	330.7	340.9
80°	132.7	167.4	232.7	255.2	261.3
82.5°	89.8	122.5	167.4	173.5	175.5
85°	55.1	75.5	98.0	98.0	98.0
87.5°	26.5	30.6	34.7	32.7	32.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)