

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: P309101

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-S-CA08-W2A-U-5500K**

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: P309101
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-5500K
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: 4364.0 lumens
Efficiency: N/A
Efficacy: 114.2 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

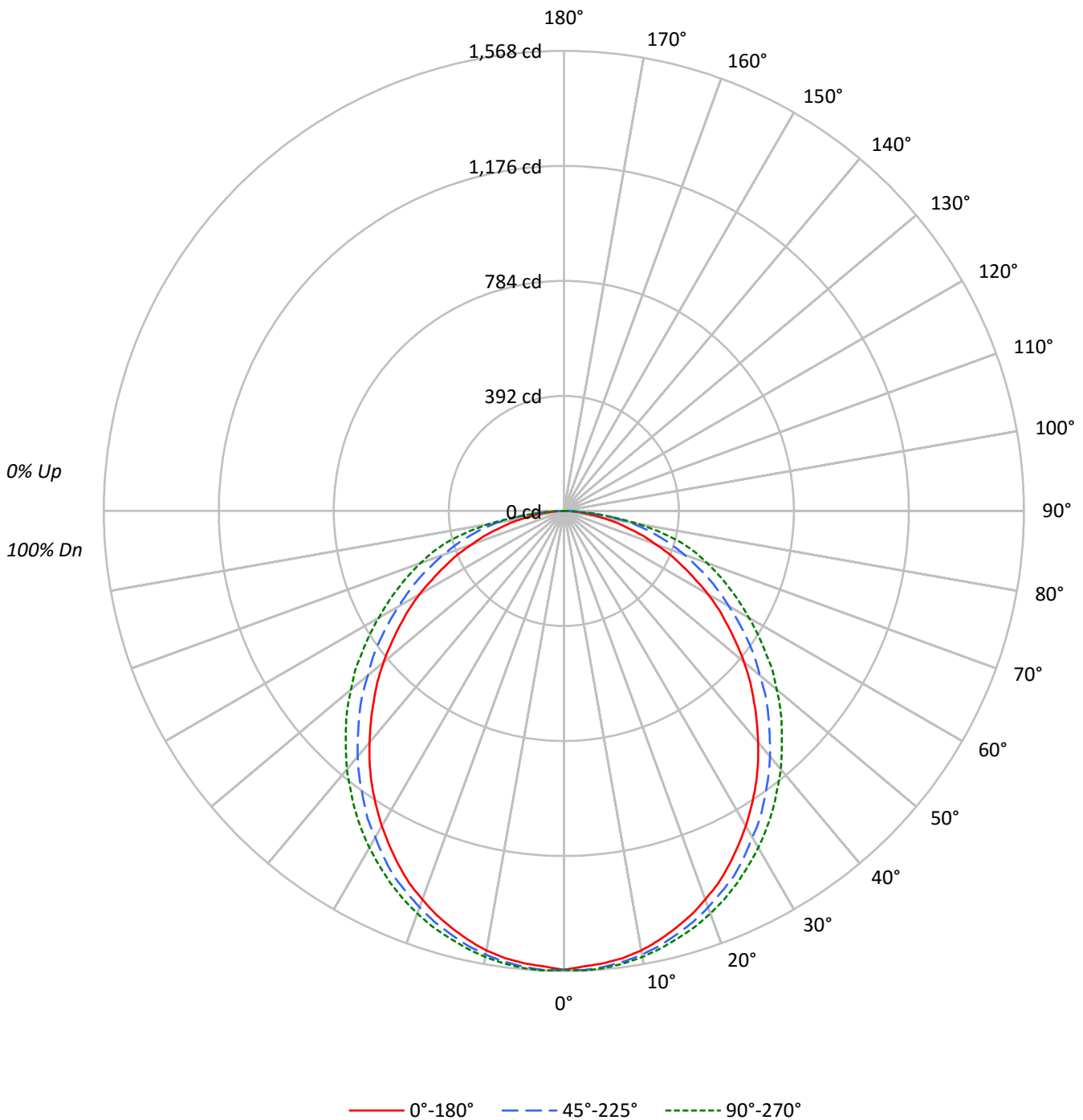
Input Watts (W): 38.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4208	4208	4208
5°	4180	4213	4224
10°	4156	4195	4217
15°	4101	4158	4198
20°	4035	4117	4181
25°	3954	4075	4153
30°	3853	3992	4119
35°	3746	3920	4080
40°	3619	3841	4041
45°	3487	3750	3998
50°	3358	3648	3964
55°	3200	3582	3936
60°	3057	3496	3923
65°	2853	3475	3968
70°	2627	3445	4085
75°	2371	3493	4297
80°	2050	3597	4038
85°	1698	3017	3017



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.9	3.4
10°-20°	420.8	9.6
20°-30°	629.7	14.4
30°-40°	745.7	17.1
40°-50°	760.0	17.4
50°-60°	681.2	15.6
60°-70°	533.3	12.2
70°-80°	343.9	7.9
80°-90°	101.6	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°	1198.4	27.5
0°-40°	1944.1	44.5
0°-60°	3385.2	77.6
0°-90°	4364.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4364.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1564	1564	1564	1564	1564	
5°	1548	1552	1560	1562	1564	147
15°	1472	1480	1492	1505	1507	415
25°	1332	1344	1372	1391	1399	613
35°	1140	1154	1193	1230	1242	713
45°	916	937	986	1036	1051	708
55°	682	704	764	816	839	612
65°	448	474	546	599	623	445
75°	228	263	336	393	413	244
85°	55	75	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°	1563.8	1563.8	1563.8	1563.8	1563.8
2.5°	1553.6	1557.6	1565.8	1567.8	1567.8
5°	1547.5	1551.5	1559.7	1561.7	1563.8
7.5°	1537.3	1539.3	1549.5	1553.6	1555.6
10°	1521.0	1525.1	1535.3	1541.4	1543.4
12.5°	1498.6	1504.7	1516.9	1525.1	1527.1
15°	1472.1	1480.3	1492.5	1504.7	1506.7
17.5°	1443.6	1451.8	1468.1	1482.3	1486.4
20°	1409.0	1419.2	1437.5	1453.8	1459.9
22.5°	1374.4	1382.5	1404.9	1425.3	1431.4
25°	1331.6	1343.9	1372.4	1390.7	1398.8
27.5°	1286.8	1301.1	1329.6	1354.0	1362.2
30°	1240.0	1254.3	1284.8	1315.3	1325.5
32.5°	1191.1	1207.4	1244.1	1274.6	1284.8
35°	1140.2	1154.5	1193.2	1229.8	1242.0
37.5°	1087.3	1099.5	1144.3	1183.0	1195.2
40°	1030.3	1046.6	1093.4	1138.2	1150.4
42.5°	973.3	991.6	1038.4	1087.3	1099.5
45°	916.3	936.6	985.5	1036.4	1050.6
47.5°	861.3	877.6	932.6	981.4	1001.8
50°	802.2	818.5	871.5	926.4	946.8
52.5°	741.2	763.6	820.6	873.5	897.9
55°	682.1	704.5	763.6	816.5	838.9
57.5°	627.1	645.5	706.5	761.5	783.9
60°	568.1	584.4	649.5	708.6	728.9
62.5°	505.0	529.4	596.6	651.6	676.0
65°	448.0	474.4	545.7	598.6	623.1
67.5°	395.0	419.4	488.7	545.7	572.2
70°	333.9	366.5	437.8	494.8	519.2
72.5°	285.1	313.6	386.9	443.9	470.3
75°	228.0	262.7	336.0	393.0	413.3
77.5°	181.2	215.8	285.1	329.9	340.0
80°	132.3	167.0	232.1	254.5	260.6
82.5°	89.6	122.2	167.0	173.1	175.1
85°	55.0	75.3	97.7	97.7	97.7
87.5°	26.5	30.5	34.6	32.6	32.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)