

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: P309099

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-S-CA08-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: P309099
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-4500K
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: 4263.0 lumens
Efficiency: N/A
Efficacy: 112.5 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

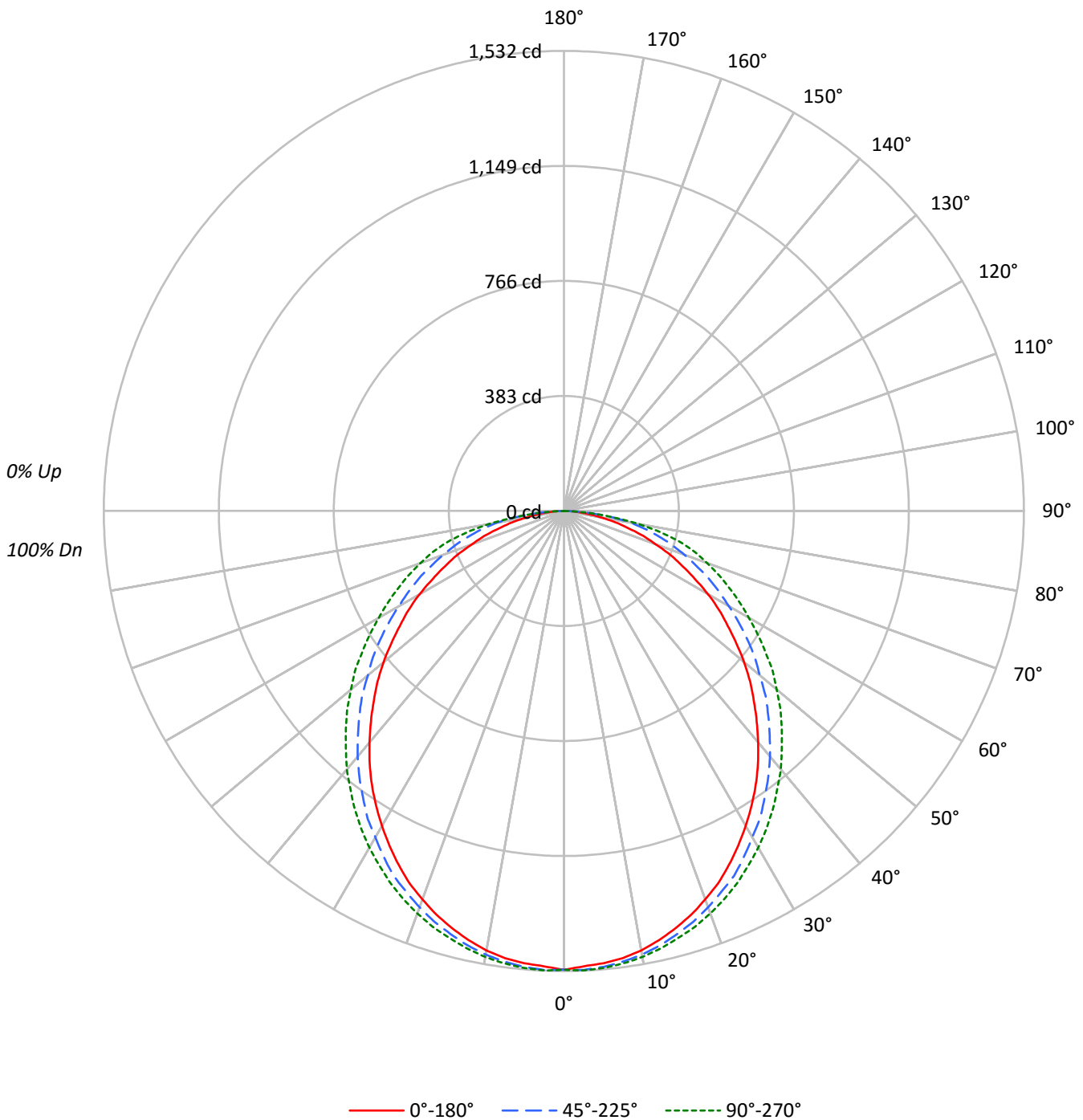
Input Watts (W): 37.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4111	4111	4111
5°	4083	4116	4126
10°	4060	4098	4120
15°	4006	4062	4101
20°	3942	4021	4084
25°	3862	3980	4057
30°	3764	3900	4024
35°	3659	3829	3986
40°	3535	3752	3948
45°	3406	3664	3906
50°	3281	3564	3872
55°	3126	3499	3845
60°	2986	3415	3832
65°	2786	3394	3875
70°	2567	3364	3991
75°	2316	3412	4198
80°	2004	3513	3945
85°	1658	2949	2949



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.5	3.4
10°-20°	411.1	9.6
20°-30°	615.1	14.4
30°-40°	728.5	17.1
40°-50°	742.4	17.4
50°-60°	665.4	15.6
60°-70°	520.9	12.2
70°-80°	335.9	7.9
80°-90°	99.2	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°	1170.7	27.5
0°-40°	1899.1	44.5
0°-60°	3306.9	77.6
0°-90°	4263.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4263.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1528	1528	1528	1528	1528	
5°	1512	1516	1524	1526	1528	144
15°	1438	1446	1458	1470	1472	405
25°	1301	1313	1341	1358	1366	599
35°	1114	1128	1166	1201	1213	696
45°	895	915	963	1012	1026	691
55°	666	688	746	798	820	597
65°	438	463	533	585	609	435
75°	223	257	328	384	404	239
85°	54	74	96	96	96	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1527.6	1527.6	1527.6	1527.6	1527.6
2.5°	1517.6	1521.6	1529.6	1531.5	1531.5
5°	1511.7	1515.6	1523.6	1525.6	1527.6
7.5°	1501.7	1503.7	1513.6	1517.6	1519.6
10°	1485.8	1489.8	1499.7	1505.7	1507.7
12.5°	1463.9	1469.9	1481.8	1489.8	1491.8
15°	1438.1	1446.0	1458.0	1469.9	1471.9
17.5°	1410.2	1418.2	1434.1	1448.0	1452.0
20°	1376.4	1386.3	1404.2	1420.2	1426.1
22.5°	1342.6	1350.5	1372.4	1392.3	1398.3
25°	1300.8	1312.8	1340.6	1358.5	1366.5
27.5°	1257.1	1271.0	1298.8	1322.7	1330.7
30°	1211.3	1225.2	1255.1	1284.9	1294.9
32.5°	1163.6	1179.5	1215.3	1245.1	1255.1
35°	1113.9	1127.8	1165.6	1201.4	1213.3
37.5°	1062.1	1074.1	1117.8	1155.6	1167.6
40°	1006.4	1022.4	1068.1	1111.9	1123.8
42.5°	950.8	968.7	1014.4	1062.1	1074.1
45°	895.1	914.9	962.7	1012.4	1026.3
47.5°	841.4	857.3	911.0	958.7	978.6
50°	783.7	799.6	851.3	905.0	924.9
52.5°	724.0	745.9	801.6	853.3	877.2
55°	666.3	688.2	745.9	797.6	819.5
57.5°	612.6	630.5	690.2	743.9	765.8
60°	554.9	570.8	634.5	692.2	712.1
62.5°	493.3	517.1	582.8	636.5	660.4
65°	437.6	463.4	533.1	584.8	608.6
67.5°	385.9	409.7	477.4	533.1	558.9
70°	326.2	358.0	427.6	483.3	507.2
72.5°	278.5	306.3	377.9	433.6	459.5
75°	222.8	256.6	328.2	383.9	403.8
77.5°	177.0	210.8	278.5	322.2	332.2
80°	129.3	163.1	226.7	248.6	254.6
82.5°	87.5	119.3	163.1	169.1	171.1
85°	53.7	73.6	95.5	95.5	95.5
87.5°	25.9	29.8	33.8	31.8	31.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)