

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: P309108

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-S-CA125-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: P309108
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-CA125-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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: 4248.0 lumens
Efficiency: N/A
Efficacy: 112.1 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

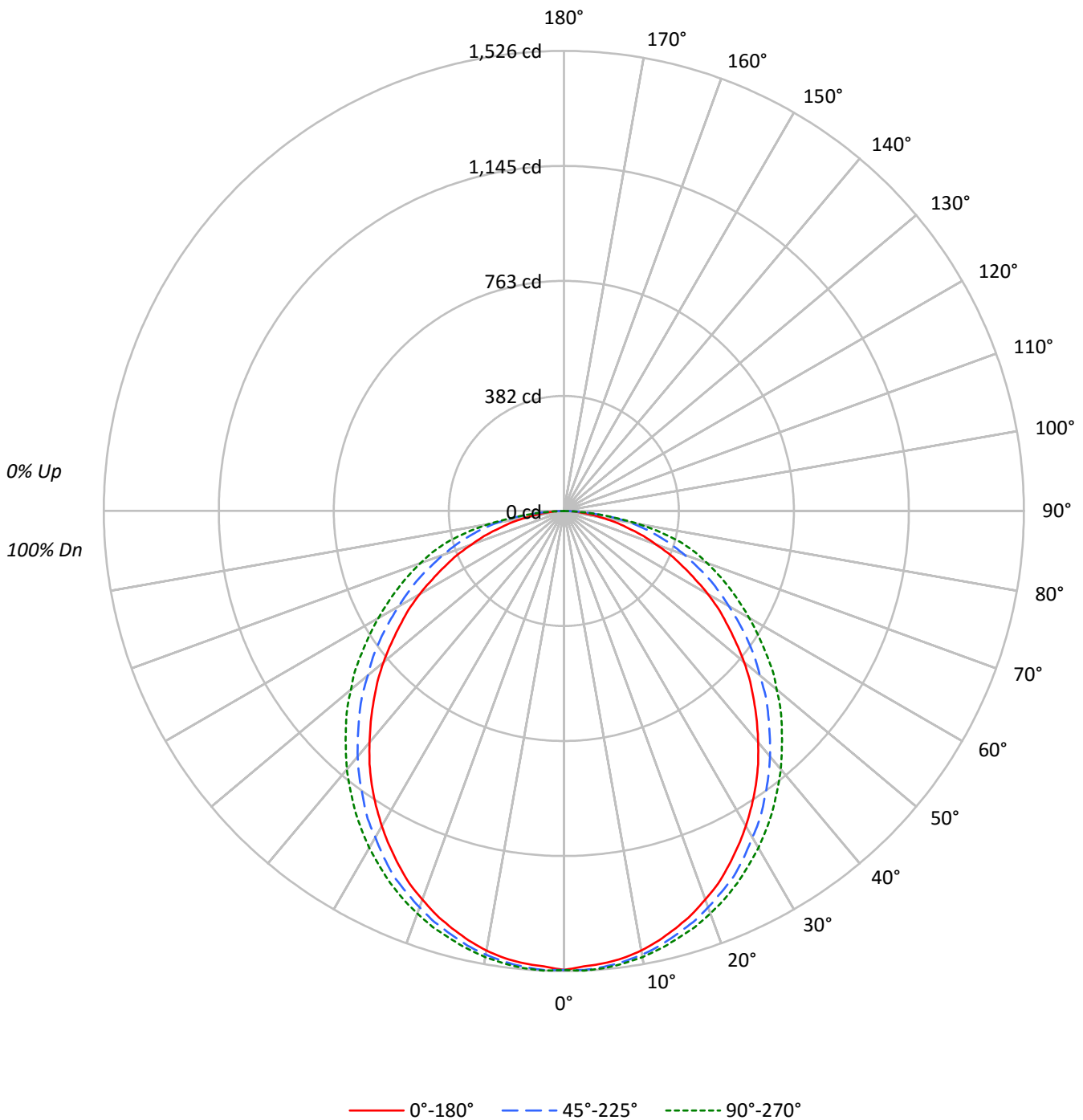
Input Watts (W): 37.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4096	4096	4096
5°	4069	4101	4112
10°	4046	4083	4105
15°	3992	4047	4086
20°	3928	4007	4070
25°	3849	3967	4043
30°	3750	3886	4009
35°	3646	3816	3972
40°	3523	3739	3934
45°	3394	3651	3892
50°	3269	3551	3858
55°	3115	3487	3831
60°	2976	3403	3819
65°	2776	3382	3862
70°	2558	3353	3976
75°	2308	3400	4183
80°	1996	3502	3932
85°	1652	2936	2936



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.9	3.4
10°-20°	409.7	9.6
20°-30°	613.0	14.4
30°-40°	725.9	17.1
40°-50°	739.8	17.4
50°-60°	663.1	15.6
60°-70°	519.1	12.2
70°-80°	334.7	7.9
80°-90°	98.9	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°	1166.6	27.5
0°-40°	1892.5	44.5
0°-60°	3295.3	77.6
0°-90°	4248.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4248.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1522	1522	1522	1522	1522	
5°	1506	1510	1518	1520	1522	143
15°	1433	1441	1453	1465	1467	404
25°	1296	1308	1336	1354	1362	597
35°	1110	1124	1162	1197	1209	694
45°	892	912	959	1009	1023	689
55°	664	686	743	795	817	595
65°	436	462	531	583	606	433
75°	222	256	327	382	402	238
85°	54	73	95	95	95	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1522.2	1522.2	1522.2	1522.2	1522.2
2.5°	1512.3	1516.2	1524.2	1526.2	1526.2
5°	1506.3	1510.3	1518.2	1520.2	1522.2
7.5°	1496.4	1498.4	1508.3	1512.3	1514.3
10°	1480.6	1484.5	1494.4	1500.4	1502.4
12.5°	1458.8	1464.7	1476.6	1484.5	1486.5
15°	1433.0	1440.9	1452.8	1464.7	1466.7
17.5°	1405.3	1413.2	1429.0	1442.9	1446.9
20°	1371.6	1381.5	1399.3	1415.2	1421.1
22.5°	1337.9	1345.8	1367.6	1387.4	1393.4
25°	1296.2	1308.1	1335.9	1353.7	1361.6
27.5°	1252.6	1266.5	1294.3	1318.0	1326.0
30°	1207.0	1220.9	1250.7	1280.4	1290.3
32.5°	1159.5	1175.3	1211.0	1240.7	1250.7
35°	1109.9	1123.8	1161.5	1197.1	1209.0
37.5°	1058.4	1070.3	1113.9	1151.6	1163.4
40°	1002.9	1018.8	1064.3	1107.9	1119.8
42.5°	947.4	965.2	1010.8	1058.4	1070.3
45°	891.9	911.7	959.3	1008.8	1022.7
47.5°	838.4	854.3	907.8	955.3	975.2
50°	780.9	796.8	848.3	901.8	921.6
52.5°	721.5	743.3	798.8	850.3	874.1
55°	664.0	685.8	743.3	794.8	816.6
57.5°	610.5	628.3	687.8	741.3	763.1
60°	553.0	568.8	632.3	689.7	709.6
62.5°	491.5	515.3	580.7	634.2	658.0
65°	436.0	461.8	531.2	582.7	606.5
67.5°	384.5	408.3	475.7	531.2	556.9
70°	325.1	356.8	426.1	481.6	505.4
72.5°	277.5	305.2	376.6	432.1	457.8
75°	222.0	255.7	327.0	382.5	402.3
77.5°	176.4	210.1	277.5	321.1	331.0
80°	128.8	162.5	226.0	247.8	253.7
82.5°	87.2	118.9	162.5	168.5	170.5
85°	53.5	73.3	95.1	95.1	95.1
87.5°	25.8	29.7	33.7	31.7	31.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)