

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: P309138

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-S-CP250-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: P309138
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-CP250-W2A-U-5700K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB 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: 4061.0 lumens
Efficiency: N/A
Efficacy: 106.3 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

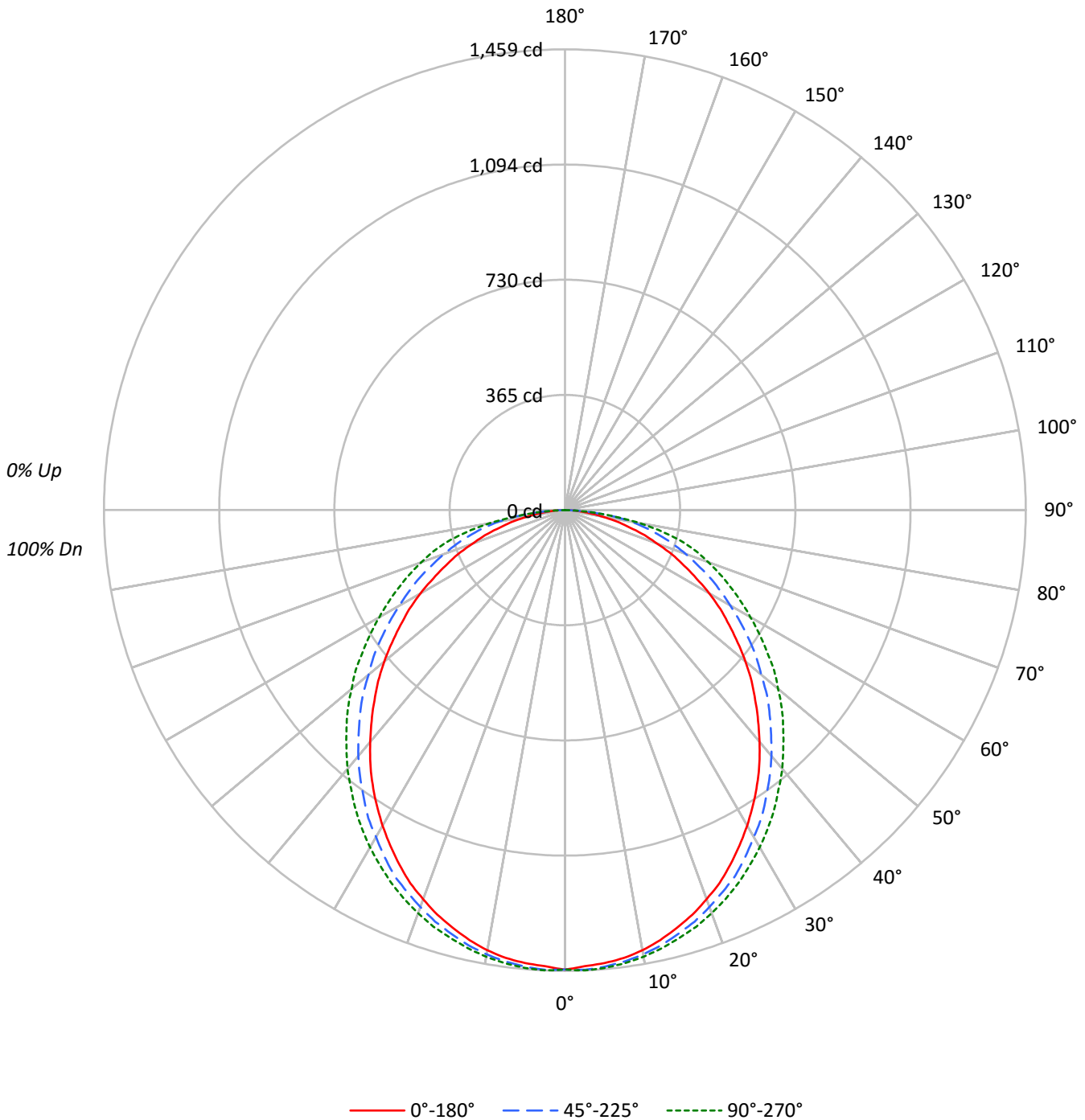
Input Watts (W): 38.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3916	3916	3916
5°	3890	3921	3931
10°	3868	3904	3924
15°	3816	3869	3906
20°	3755	3831	3890
25°	3679	3792	3865
30°	3585	3715	3833
35°	3486	3647	3797
40°	3368	3574	3760
45°	3245	3490	3721
50°	3125	3395	3689
55°	2978	3333	3662
60°	2845	3253	3651
65°	2654	3233	3692
70°	2445	3205	3802
75°	2206	3250	3999
80°	1909	3347	3758
85°	1581	2807	2807



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.6	3.4
10°-20°	391.6	9.6
20°-30°	586.0	14.4
30°-40°	693.9	17.1
40°-50°	707.2	17.4
50°-60°	633.8	15.6
60°-70°	496.3	12.2
70°-80°	320.0	7.9
80°-90°	94.5	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°	1115.2	27.5
0°-40°	1809.1	44.5
0°-60°	3150.2	77.6
0°-90°	4061.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4061.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1455	1455	1455	1455	1455	
5°	1440	1444	1451	1453	1455	137
15°	1370	1378	1389	1400	1402	386
25°	1239	1250	1277	1294	1302	570
35°	1061	1074	1110	1144	1156	663
45°	853	872	917	964	978	658
55°	635	656	710	760	781	569
65°	417	442	508	557	580	414
75°	212	244	313	366	385	228
85°	51	70	91	91	91	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1455.2	1455.2	1455.2	1455.2	1455.2
2.5°	1445.7	1449.5	1457.1	1459.0	1459.0
5°	1440.0	1443.8	1451.4	1453.3	1455.2
7.5°	1430.6	1432.4	1441.9	1445.7	1447.6
10°	1415.4	1419.2	1428.7	1434.3	1436.2
12.5°	1394.6	1400.2	1411.6	1419.2	1421.1
15°	1369.9	1377.5	1388.9	1400.2	1402.1
17.5°	1343.4	1351.0	1366.1	1379.4	1383.2
20°	1311.2	1320.7	1337.7	1352.9	1358.5
22.5°	1279.0	1286.5	1307.4	1326.3	1332.0
25°	1239.2	1250.5	1277.1	1294.1	1301.7
27.5°	1197.5	1210.8	1237.3	1260.0	1267.6
30°	1153.9	1167.2	1195.6	1224.0	1233.5
32.5°	1108.4	1123.6	1157.7	1186.1	1195.6
35°	1061.1	1074.3	1110.3	1144.4	1155.8
37.5°	1011.8	1023.2	1064.9	1100.9	1112.2
40°	958.8	973.9	1017.5	1059.2	1070.5
42.5°	905.7	922.8	966.3	1011.8	1023.2
45°	852.6	871.6	917.1	964.4	977.7
47.5°	801.5	816.6	867.8	913.3	932.2
50°	746.5	761.7	811.0	862.1	881.1
52.5°	689.7	710.5	763.6	812.9	835.6
55°	634.7	655.6	710.5	759.8	780.6
57.5°	583.6	600.6	657.5	708.6	729.5
60°	528.6	543.8	604.4	659.4	678.3
62.5°	469.9	492.6	555.2	606.3	629.1
65°	416.8	441.5	507.8	557.1	579.8
67.5°	367.6	390.3	454.7	507.8	532.4
70°	310.7	341.1	407.4	460.4	483.2
72.5°	265.3	291.8	360.0	413.1	437.7
75°	212.2	244.4	312.6	365.7	384.6
77.5°	168.6	200.8	265.3	307.0	316.4
80°	123.2	155.4	216.0	236.8	242.5
82.5°	83.4	113.7	155.4	161.1	163.0
85°	51.2	70.1	90.9	90.9	90.9
87.5°	24.6	28.4	32.2	30.3	30.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)