

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: P309096

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-S-CA08-W2A-U-3000K**

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: P309096
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-3000K
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: 3962.0 lumens
Efficiency: N/A
Efficacy: 107.4 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

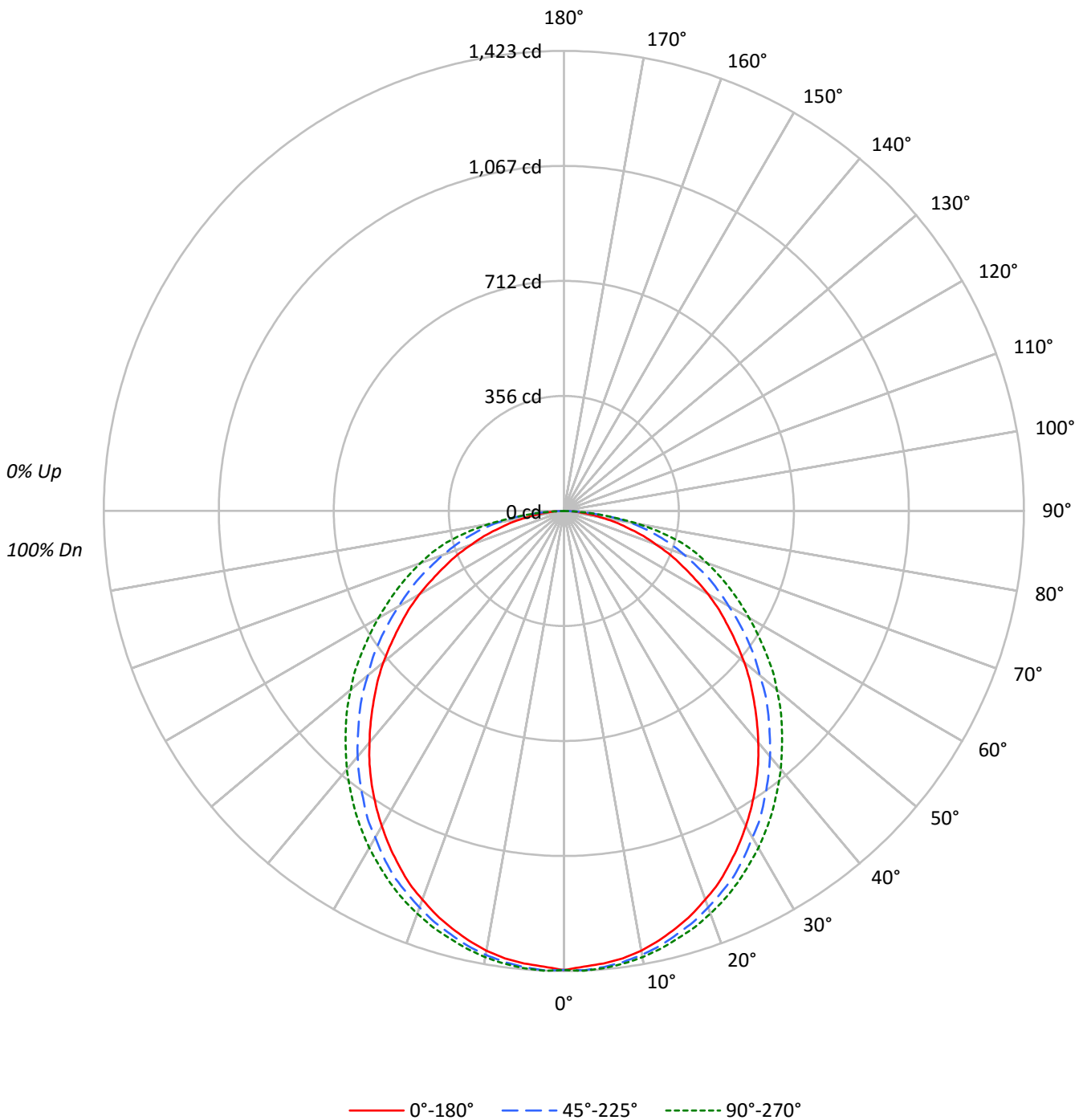
Input Watts (W): 36.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3820	3820	3820
5°	3795	3825	3835
10°	3773	3809	3829
15°	3723	3775	3811
20°	3663	3737	3796
25°	3590	3699	3771
30°	3498	3625	3739
35°	3401	3559	3704
40°	3286	3487	3669
45°	3166	3405	3630
50°	3049	3312	3599
55°	2905	3252	3573
60°	2776	3174	3562
65°	2590	3154	3602
70°	2386	3127	3709
75°	2152	3171	3902
80°	1863	3265	3667
85°	1541	2739	2739



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.3	3.4
10°-20°	382.1	9.6
20°-30°	571.7	14.4
30°-40°	677.0	17.1
40°-50°	690.0	17.4
50°-60°	618.4	15.6
60°-70°	484.1	12.2
70°-80°	312.2	7.9
80°-90°	92.2	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°	1088.0	27.5
0°-40°	1765.0	44.5
0°-60°	3073.4	77.6
0°-90°	3962.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3962.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1420	1420	1420	1420	1420	
5°	1405	1409	1416	1418	1420	133
15°	1336	1344	1355	1366	1368	377
25°	1209	1220	1246	1263	1270	557
35°	1035	1048	1083	1116	1128	647
45°	832	850	895	941	954	642
55°	619	640	693	741	762	555
65°	407	431	495	544	566	404
75°	207	238	305	357	375	222
85°	50	68	89	89	89	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1419.7	1419.7	1419.7	1419.7	1419.7
2.5°	1410.5	1414.2	1421.6	1423.4	1423.4
5°	1404.9	1408.6	1416.0	1417.9	1419.7
7.5°	1395.7	1397.5	1406.8	1410.5	1412.3
10°	1380.9	1384.6	1393.8	1399.4	1401.2
12.5°	1360.6	1366.1	1377.2	1384.6	1386.4
15°	1336.5	1343.9	1355.0	1366.1	1367.9
17.5°	1310.6	1318.0	1332.8	1345.8	1349.5
20°	1279.2	1288.5	1305.1	1319.9	1325.4
22.5°	1247.8	1255.2	1275.5	1294.0	1299.6
25°	1209.0	1220.1	1245.9	1262.6	1270.0
27.5°	1168.3	1181.2	1207.1	1229.3	1236.7
30°	1125.8	1138.7	1166.5	1194.2	1203.4
32.5°	1081.4	1096.2	1129.5	1157.2	1166.5
35°	1035.2	1048.1	1083.3	1116.5	1127.6
37.5°	987.1	998.2	1038.9	1074.0	1085.1
40°	935.4	950.2	992.7	1033.4	1044.4
42.5°	883.6	900.3	942.8	987.1	998.2
45°	831.9	850.3	894.7	940.9	953.9
47.5°	781.9	796.7	846.6	891.0	909.5
50°	728.3	743.1	791.2	841.1	859.6
52.5°	672.9	693.2	745.0	793.0	815.2
55°	619.3	639.6	693.2	741.3	761.6
57.5°	569.4	586.0	641.5	691.4	711.7
60°	515.8	530.5	589.7	643.3	661.8
62.5°	458.4	480.6	541.6	591.5	613.7
65°	406.7	430.7	495.4	543.5	565.7
67.5°	358.6	380.8	443.7	495.4	519.5
70°	303.2	332.7	397.4	449.2	471.4
72.5°	258.8	284.7	351.2	403.0	427.0
75°	207.0	238.5	305.0	356.8	375.3
77.5°	164.5	195.9	258.8	299.5	308.7
80°	120.2	151.6	210.7	231.1	236.6
82.5°	81.3	110.9	151.6	157.1	159.0
85°	49.9	68.4	88.7	88.7	88.7
87.5°	24.0	27.7	31.4	29.6	29.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)