

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: P308833

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-CA08-W2A-U-6500K**

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: P308833
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
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-CA08-W2A-U-6500K
Description: 2'X2' TROFFER LED MODULE, RIBBED 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: 4160.0 lumens
Efficiency: N/A
Efficacy: 106.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

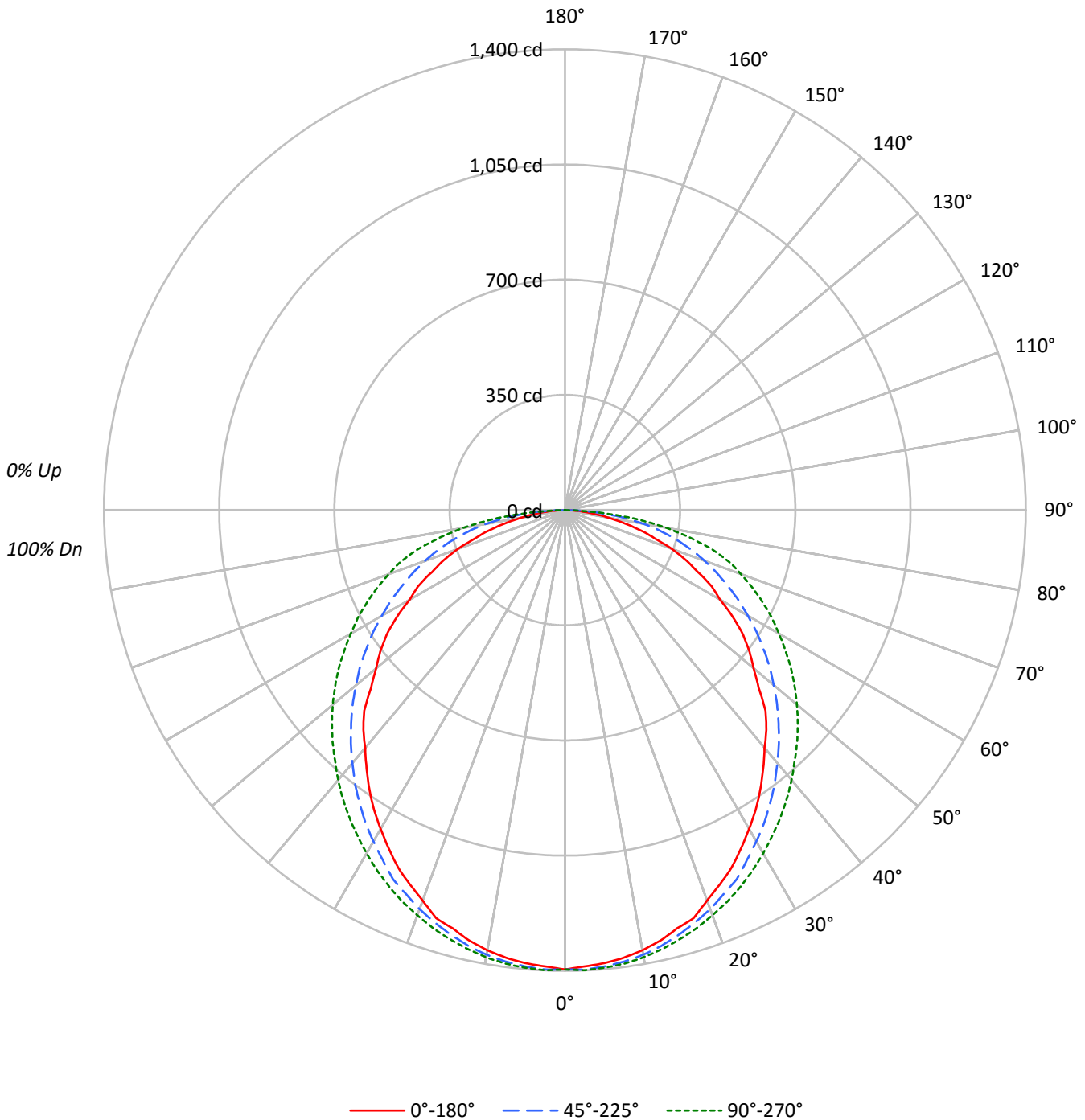
Input Watts (W): 38.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3756	3756	3756
5°	3733	3759	3770
10°	3710	3748	3770
15°	3667	3722	3761
20°	3615	3695	3752
25°	3559	3671	3748
30°	3477	3613	3743
35°	3401	3571	3748
40°	3315	3525	3763
45°	3281	3493	3796
50°	3134	3468	3851
55°	3101	3456	3932
60°	2926	3450	4040
65°	2840	3473	4222
70°	2725	3556	4480
75°	2484	3664	4823
80°	2129	3795	4875
85°	1720	3628	4181



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.1	3.2
10°-20°	376.8	9.1
20°-30°	567.0	13.6
30°-40°	680.6	16.4
40°-50°	711.3	17.1
50°-60°	662.9	15.9
60°-70°	543.7	13.1
70°-80°	366.4	8.8
80°-90°	119.3	2.9
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°	1075.9	25.9
0°-40°	1756.4	42.2
0°-60°	3130.6	75.3
0°-90°	4160.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4160.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1396	1396	1396	1396	1396	
5°	1382	1386	1392	1394	1396	131
15°	1316	1324	1336	1348	1350	372
25°	1199	1207	1236	1254	1262	551
35°	1035	1049	1087	1125	1141	647
45°	862	868	918	974	998	659
55°	661	673	737	806	838	586
65°	446	466	546	625	663	444
75°	239	265	352	432	464	251
85°	56	80	118	137	135	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1395.7	1395.7	1395.7	1395.7	1395.7
2.5°	1387.8	1391.7	1397.7	1399.7	1399.7
5°	1381.8	1385.8	1391.7	1393.7	1395.7
7.5°	1371.8	1375.8	1383.8	1387.8	1389.7
10°	1357.9	1361.9	1371.8	1377.8	1379.8
12.5°	1340.0	1343.9	1355.9	1363.9	1365.8
15°	1316.1	1324.0	1336.0	1347.9	1349.9
17.5°	1300.1	1298.2	1314.1	1328.0	1332.0
20°	1262.3	1272.3	1290.2	1306.1	1310.1
22.5°	1230.5	1238.4	1262.3	1280.2	1288.2
25°	1198.6	1206.6	1236.4	1254.4	1262.3
27.5°	1158.8	1170.7	1198.6	1224.5	1234.4
30°	1119.0	1130.9	1162.8	1192.6	1204.6
32.5°	1079.1	1093.1	1126.9	1158.8	1172.7
35°	1035.3	1049.3	1087.1	1124.9	1140.9
37.5°	989.5	1007.5	1047.3	1089.1	1107.0
40°	943.8	961.7	1003.5	1051.3	1071.2
42.5°	905.9	913.9	961.7	1013.4	1033.3
45°	862.1	868.1	917.9	973.6	997.5
47.5°	798.4	820.3	874.1	935.8	959.7
50°	748.6	772.5	828.3	894.0	919.9
52.5°	706.8	722.7	784.5	850.2	880.0
55°	661.0	673.0	736.7	806.4	838.2
57.5°	605.3	627.2	690.9	762.6	794.4
60°	543.6	571.4	641.1	718.8	750.6
62.5°	503.7	519.7	595.3	673.0	708.8
65°	446.0	465.9	545.5	625.2	663.0
67.5°	398.2	418.1	499.7	579.4	617.2
70°	346.4	366.4	452.0	531.6	569.4
72.5°	286.7	314.6	404.2	483.8	523.6
75°	238.9	264.8	352.4	432.1	463.9
77.5°	185.2	219.0	300.6	366.4	390.2
80°	137.4	171.2	244.9	292.7	314.6
82.5°	93.6	127.4	183.2	219.0	231.0
85°	55.7	79.6	117.5	137.4	135.4
87.5°	25.9	33.8	47.8	47.8	45.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)