

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: P312867

Luminaire Tested: **22FCZ2-44HE-UNV-L83050-CA08-W2A-U-4000K**

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: P312867
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-L83050-CA08-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 4000K 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: 4178.0 lumens
Efficiency: N/A
Efficacy: 109.7 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

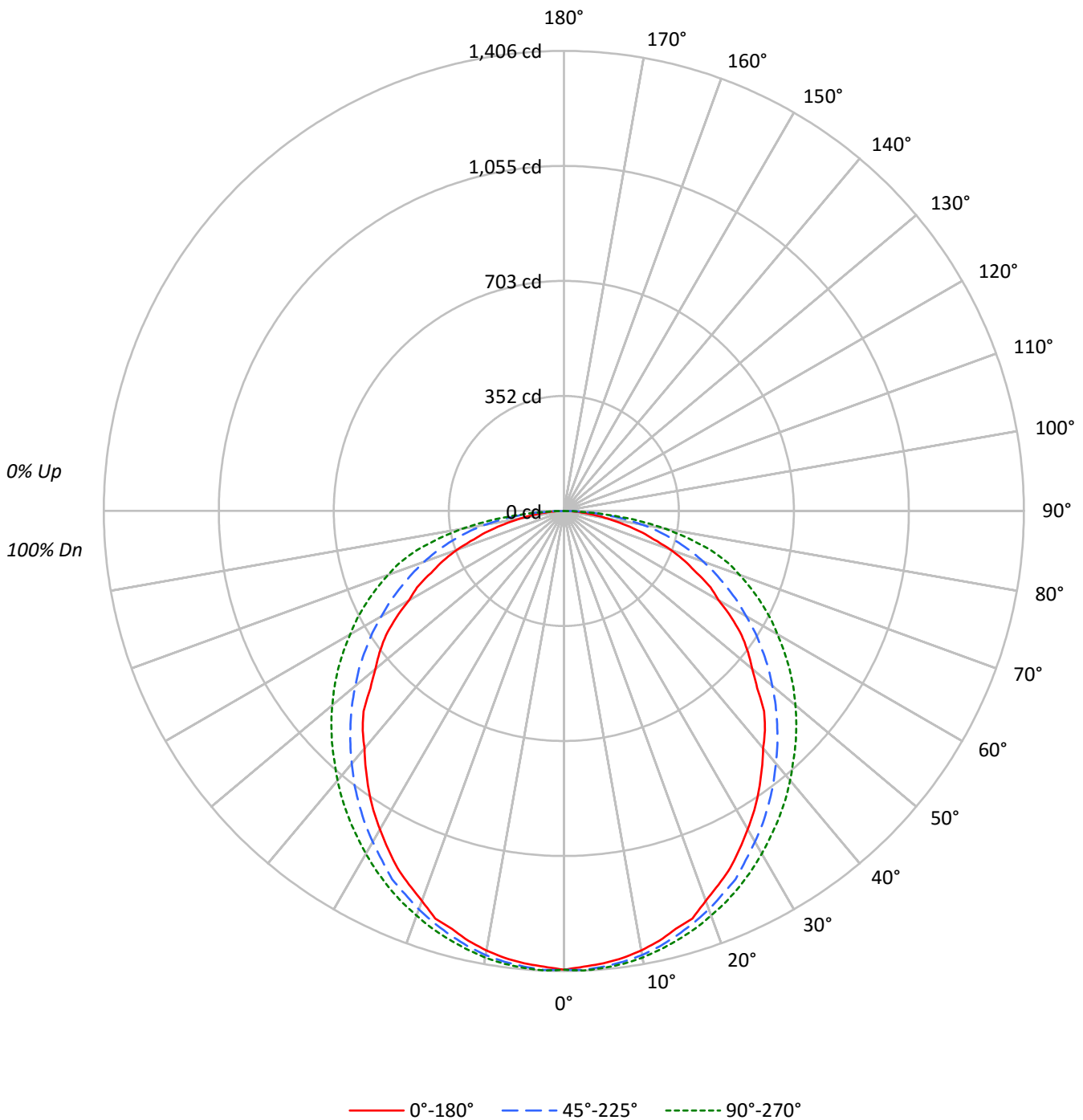
Input Watts (W): 38.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3772	3772	3772
5°	3749	3776	3787
10°	3727	3765	3787
15°	3682	3738	3777
20°	3631	3711	3768
25°	3574	3687	3764
30°	3492	3629	3759
35°	3416	3587	3764
40°	3329	3540	3779
45°	3295	3508	3812
50°	3148	3483	3867
55°	3115	3471	3950
60°	2938	3465	4057
65°	2852	3489	4240
70°	2737	3571	4500
75°	2495	3680	4844
80°	2139	3812	4895
85°	1729	3643	4199



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.6	3.2
10°-20°	378.4	9.1
20°-30°	569.5	13.6
30°-40°	683.5	16.4
40°-50°	714.4	17.1
50°-60°	665.8	15.9
60°-70°	546.0	13.1
70°-80°	367.9	8.8
80°-90°	119.9	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°	1080.5	25.9
0°-40°	1764.0	42.2
0°-60°	3144.2	75.3
0°-90°	4178.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4178.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1402	1402	1402	1402	1402	
5°	1388	1392	1398	1400	1402	132
15°	1322	1330	1342	1354	1356	374
25°	1204	1212	1242	1260	1268	553
35°	1040	1054	1092	1130	1146	650
45°	866	872	922	978	1002	661
55°	664	676	740	810	842	588
65°	448	468	548	628	666	446
75°	240	266	354	434	466	252
85°	56	80	118	138	136	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1401.8	1401.8	1401.8	1401.8	1401.8
2.5°	1393.8	1397.8	1403.8	1405.8	1405.8
5°	1387.8	1391.8	1397.8	1399.8	1401.8
7.5°	1377.8	1381.8	1389.8	1393.8	1395.8
10°	1363.8	1367.8	1377.8	1383.8	1385.8
12.5°	1345.8	1349.8	1361.8	1369.8	1371.8
15°	1321.8	1329.8	1341.8	1353.8	1355.8
17.5°	1305.8	1303.8	1319.8	1333.8	1337.8
20°	1267.8	1277.8	1295.8	1311.8	1315.8
22.5°	1235.8	1243.8	1267.8	1285.8	1293.8
25°	1203.8	1211.8	1241.8	1259.8	1267.8
27.5°	1163.8	1175.8	1203.8	1229.8	1239.8
30°	1123.8	1135.8	1167.8	1197.8	1209.8
32.5°	1083.8	1097.8	1131.8	1163.8	1177.8
35°	1039.8	1053.8	1091.8	1129.8	1145.8
37.5°	993.8	1011.8	1051.8	1093.8	1111.8
40°	947.8	965.8	1007.8	1055.8	1075.8
42.5°	909.8	917.8	965.8	1017.8	1037.8
45°	865.8	871.8	921.8	977.8	1001.8
47.5°	801.9	823.9	877.8	939.8	963.8
50°	751.9	775.9	831.9	897.8	923.8
52.5°	709.9	725.9	787.9	853.9	883.8
55°	663.9	675.9	739.9	809.9	841.9
57.5°	607.9	629.9	693.9	765.9	797.9
60°	545.9	573.9	643.9	721.9	753.9
62.5°	505.9	521.9	597.9	675.9	711.9
65°	447.9	467.9	547.9	627.9	665.9
67.5°	399.9	419.9	501.9	581.9	619.9
70°	347.9	367.9	453.9	533.9	571.9
72.5°	287.9	315.9	405.9	485.9	525.9
75°	240.0	266.0	353.9	433.9	465.9
77.5°	186.0	220.0	301.9	367.9	391.9
80°	138.0	172.0	246.0	293.9	315.9
82.5°	94.0	128.0	184.0	220.0	232.0
85°	56.0	80.0	118.0	138.0	136.0
87.5°	26.0	34.0	48.0	48.0	46.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)