

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: P308838

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-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: P308838
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-CA125-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, RIBBED 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: 4028.0 lumens
Efficiency: N/A
Efficacy: 106.3 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

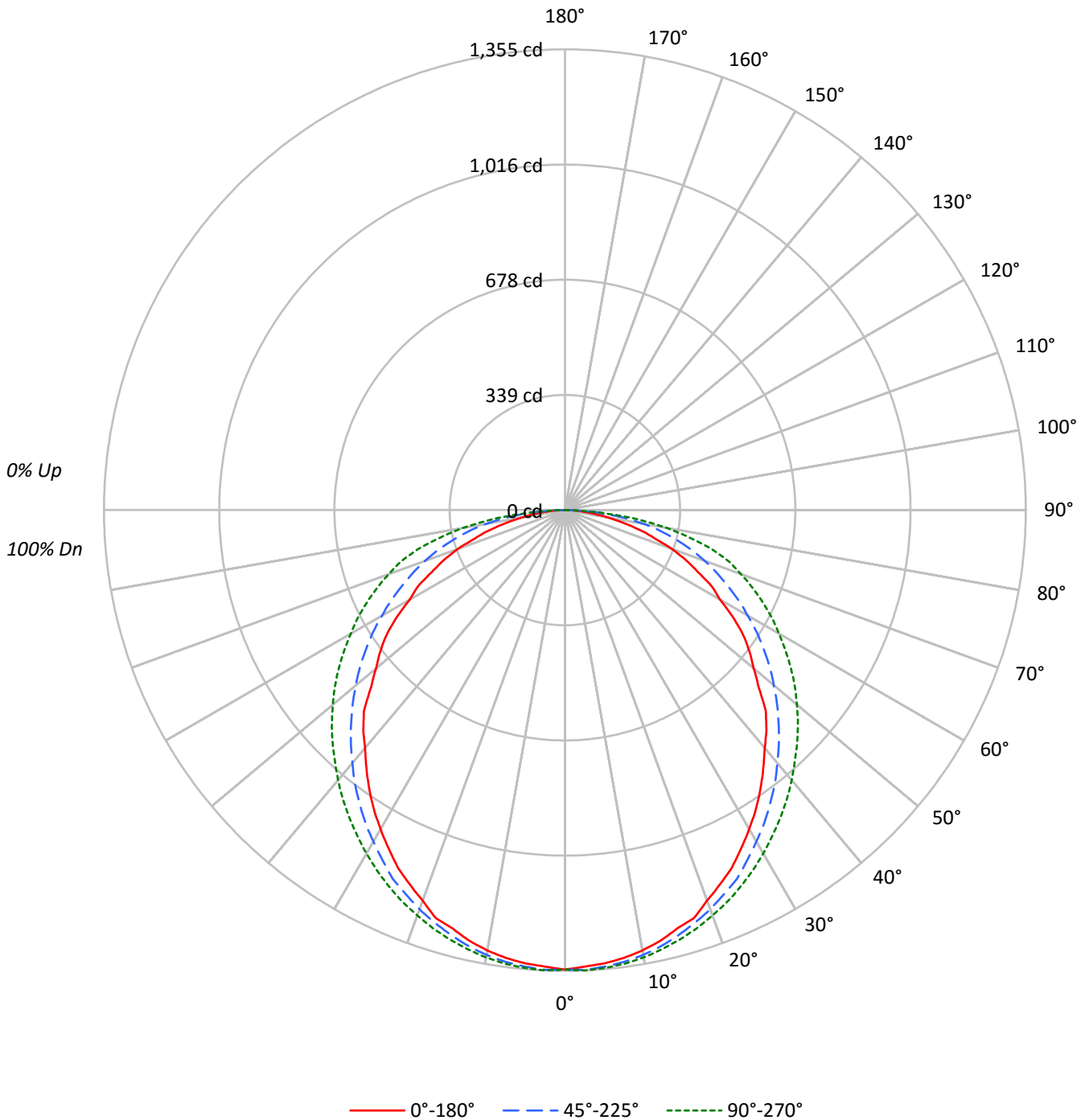
Input Watts (W): 37.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	3637	3637	3637
5°	3614	3640	3650
10°	3593	3630	3651
15°	3550	3604	3641
20°	3500	3578	3633
25°	3446	3555	3629
30°	3367	3498	3624
35°	3293	3458	3629
40°	3210	3413	3644
45°	3177	3382	3676
50°	3035	3358	3729
55°	3003	3347	3808
60°	2833	3341	3912
65°	2749	3363	4088
70°	2639	3443	4338
75°	2405	3548	4670
80°	2061	3674	4720
85°	1667	3511	4048



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.9	3.2
10°-20°	364.8	9.1
20°-30°	549.1	13.6
30°-40°	659.0	16.4
40°-50°	688.7	17.1
50°-60°	641.9	15.9
60°-70°	526.4	13.1
70°-80°	354.7	8.8
80°-90°	115.5	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°	1041.7	25.9
0°-40°	1700.7	42.2
0°-60°	3031.3	75.3
0°-90°	4028.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4028.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1351	1351	1351	1351	1351	
5°	1338	1342	1348	1350	1351	127
15°	1274	1282	1294	1305	1307	360
25°	1161	1168	1197	1215	1222	534
35°	1002	1016	1053	1089	1105	627
45°	835	840	889	943	966	638
55°	640	652	713	781	812	567
65°	432	451	528	605	642	430
75°	231	256	341	418	449	243
85°	54	77	114	133	131	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1351.4	1351.4	1351.4	1351.4	1351.4
2.5°	1343.7	1347.6	1353.4	1355.3	1355.3
5°	1337.9	1341.8	1347.6	1349.5	1351.4
7.5°	1328.3	1332.1	1339.9	1343.7	1345.6
10°	1314.8	1318.7	1328.3	1334.1	1336.0
12.5°	1297.4	1301.3	1312.9	1320.6	1322.5
15°	1274.3	1282.0	1293.6	1305.2	1307.1
17.5°	1258.9	1257.0	1272.4	1285.9	1289.7
20°	1222.3	1231.9	1249.3	1264.7	1268.5
22.5°	1191.4	1199.1	1222.3	1239.6	1247.3
25°	1160.6	1168.3	1197.2	1214.6	1222.3
27.5°	1122.0	1133.6	1160.6	1185.6	1195.3
30°	1083.5	1095.0	1125.9	1154.8	1166.4
32.5°	1044.9	1058.4	1091.2	1122.0	1135.5
35°	1002.5	1016.0	1052.6	1089.2	1104.7
37.5°	958.1	975.5	1014.1	1054.5	1071.9
40°	913.8	931.2	971.6	1017.9	1037.2
42.5°	877.2	884.9	931.2	981.3	1000.6
45°	834.8	840.5	888.7	942.7	965.9
47.5°	773.1	794.3	846.3	906.1	929.2
50°	724.9	748.0	802.0	865.6	890.7
52.5°	684.4	699.8	759.6	823.2	852.1
55°	640.0	651.6	713.3	780.8	811.6
57.5°	586.1	607.3	669.0	738.4	769.2
60°	526.3	553.3	620.8	696.0	726.8
62.5°	487.7	503.2	576.4	651.6	686.3
65°	431.8	451.1	528.2	605.3	642.0
67.5°	385.6	404.9	483.9	561.0	597.6
70°	335.4	354.7	437.6	514.7	551.4
72.5°	277.6	304.6	391.4	468.5	507.0
75°	231.3	256.4	341.2	418.3	449.2
77.5°	179.3	212.1	291.1	354.7	377.9
80°	133.0	165.8	237.1	283.4	304.6
82.5°	90.6	123.4	177.4	212.1	223.6
85°	54.0	77.1	113.7	133.0	131.1
87.5°	25.1	32.8	46.3	46.3	44.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)