

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: P308788

Luminaire Tested: **22FCZ2-39HE-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: P308788
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: 22FCZ2-39HE-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: 3707.0 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

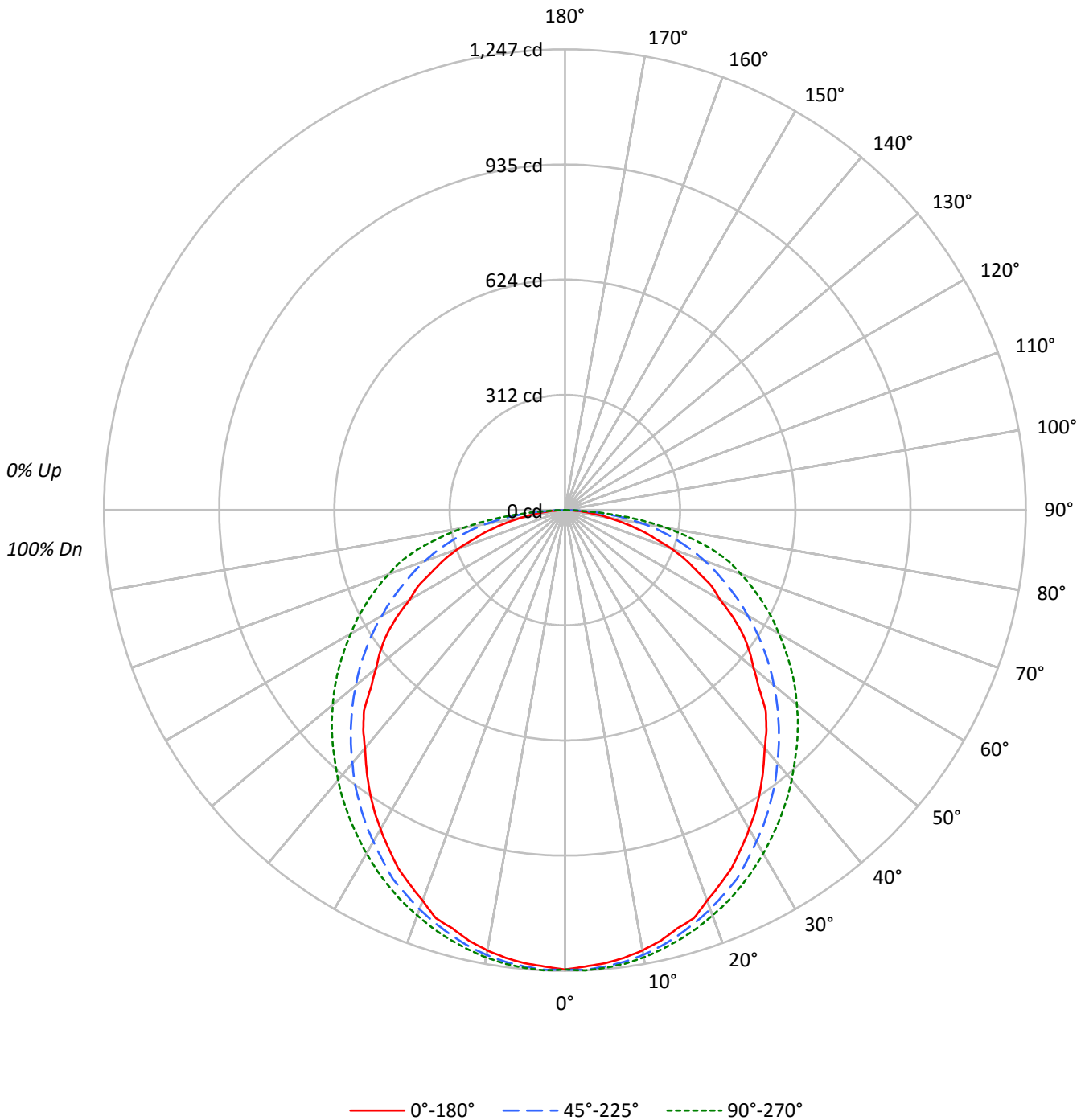
Input Watts (W): 33.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3347	3347	3347
5°	3326	3350	3360
10°	3306	3340	3360
15°	3267	3317	3351
20°	3221	3292	3343
25°	3171	3271	3340
30°	3098	3219	3335
35°	3031	3182	3340
40°	2954	3141	3353
45°	2923	3113	3383
50°	2793	3090	3432
55°	2763	3080	3504
60°	2607	3075	3600
65°	2530	3095	3762
70°	2429	3168	3992
75°	2214	3265	4298
80°	1897	3381	4344
85°	1535	3233	3724



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.7	3.2
10°-20°	335.7	9.1
20°-30°	505.3	13.6
30°-40°	606.4	16.4
40°-50°	633.9	17.1
50°-60°	590.7	15.9
60°-70°	484.5	13.1
70°-80°	326.5	8.8
80°-90°	106.3	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°	958.7	25.9
0°-40°	1565.2	42.2
0°-60°	2789.7	75.3
0°-90°	3707.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3707.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1244	1244	1244	1244	1244	
5°	1231	1235	1240	1242	1244	117
15°	1173	1180	1190	1201	1203	331
25°	1068	1075	1102	1118	1125	491
35°	923	935	969	1002	1017	577
45°	768	774	818	868	889	587
55°	589	600	656	719	747	522
65°	397	415	486	557	591	395
75°	213	236	314	385	413	224
85°	50	71	105	122	121	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1243.7	1243.7	1243.7	1243.7	1243.7
2.5°	1236.6	1240.2	1245.5	1247.3	1247.3
5°	1231.3	1234.9	1240.2	1242.0	1243.7
7.5°	1222.4	1226.0	1233.1	1236.6	1238.4
10°	1210.0	1213.6	1222.4	1227.8	1229.5
12.5°	1194.1	1197.6	1208.2	1215.3	1217.1
15°	1172.8	1179.9	1190.5	1201.1	1202.9
17.5°	1158.6	1156.8	1171.0	1183.4	1187.0
20°	1124.9	1133.7	1149.7	1163.9	1167.4
22.5°	1096.5	1103.6	1124.9	1140.8	1147.9
25°	1068.1	1075.2	1101.8	1117.8	1124.9
27.5°	1032.6	1043.2	1068.1	1091.1	1100.0
30°	997.1	1007.8	1036.1	1062.8	1073.4
32.5°	961.6	974.0	1004.2	1032.6	1045.0
35°	922.6	935.0	968.7	1002.4	1016.6
37.5°	881.8	897.8	933.2	970.5	986.5
40°	841.0	856.9	894.2	936.8	954.5
42.5°	807.3	814.4	856.9	903.1	920.8
45°	768.2	773.6	817.9	867.6	888.9
47.5°	711.5	731.0	778.9	833.9	855.2
50°	667.1	688.4	738.1	796.6	819.7
52.5°	629.8	644.0	699.0	757.6	784.2
55°	589.0	599.7	656.5	718.6	746.9
57.5°	539.4	558.9	615.7	679.5	707.9
60°	484.4	509.2	571.3	640.5	668.9
62.5°	448.9	463.1	530.5	599.7	631.6
65°	397.4	415.2	486.1	557.1	590.8
67.5°	354.8	372.6	445.3	516.3	550.0
70°	308.7	326.5	402.7	473.7	507.4
72.5°	255.5	280.3	360.2	431.1	466.6
75°	212.9	236.0	314.0	385.0	413.4
77.5°	165.0	195.2	267.9	326.5	347.7
80°	122.4	152.6	218.2	260.8	280.3
82.5°	83.4	113.6	163.2	195.2	205.8
85°	49.7	71.0	104.7	122.4	120.6
87.5°	23.1	30.2	42.6	42.6	40.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)