

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: P308787

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-CA08-W2A-U-5700K**

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: P308787
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-5700K
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: 3698.0 lumens
Efficiency: N/A
Efficacy: 111.1 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

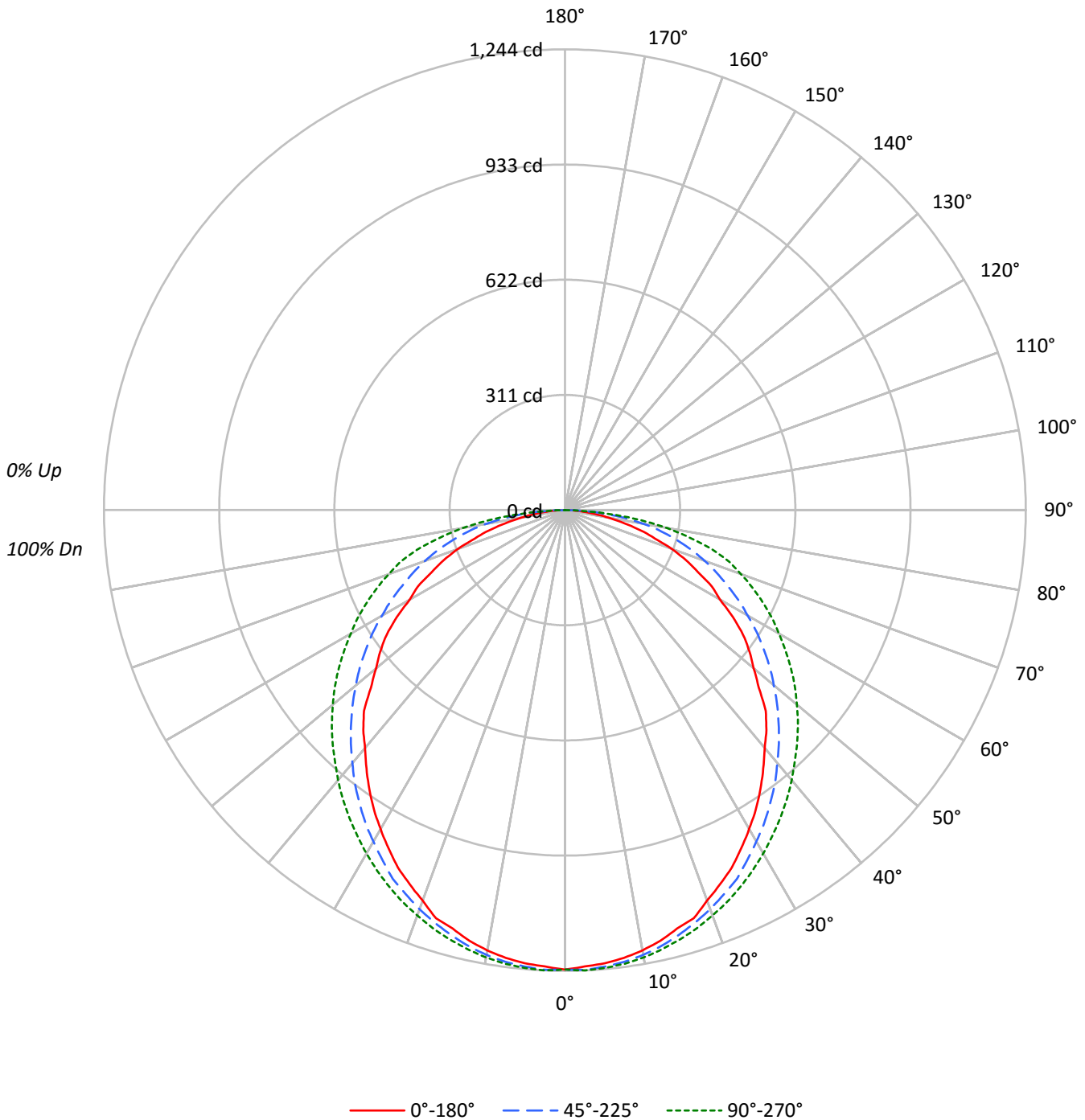
Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3339	3339	3339
5°	3318	3342	3351
10°	3298	3332	3352
15°	3259	3309	3343
20°	3213	3284	3335
25°	3164	3263	3332
30°	3091	3212	3327
35°	3024	3175	3332
40°	2947	3133	3345
45°	2917	3105	3374
50°	2786	3082	3423
55°	2757	3073	3496
60°	2601	3067	3591
65°	2525	3088	3753
70°	2423	3161	3983
75°	2208	3257	4288
80°	1892	3374	4333
85°	1531	3223	3717



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.4	3.2
10°-20°	334.9	9.1
20°-30°	504.1	13.6
30°-40°	605.0	16.4
40°-50°	632.3	17.1
50°-60°	589.3	15.9
60°-70°	483.3	13.1
70°-80°	325.7	8.8
80°-90°	106.1	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°	956.4	25.9
0°-40°	1561.4	42.2
0°-60°	2783.0	75.3
0°-90°	3698.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3698.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1241	1241	1241	1241	1241	
5°	1228	1232	1237	1239	1241	117
15°	1170	1177	1188	1198	1200	331
25°	1066	1073	1099	1115	1122	490
35°	920	933	966	1000	1014	575
45°	766	772	816	866	887	585
55°	588	598	655	717	745	521
65°	396	414	485	556	589	394
75°	212	235	313	384	412	223
85°	50	71	104	122	120	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1240.7	1240.7	1240.7	1240.7	1240.7
2.5°	1233.6	1237.2	1242.5	1244.3	1244.3
5°	1228.3	1231.9	1237.2	1238.9	1240.7
7.5°	1219.5	1223.0	1230.1	1233.6	1235.4
10°	1207.1	1210.6	1219.5	1224.8	1226.6
12.5°	1191.2	1194.7	1205.3	1212.4	1214.2
15°	1169.9	1177.0	1187.6	1198.2	1200.0
17.5°	1155.8	1154.0	1168.1	1180.5	1184.1
20°	1122.1	1131.0	1146.9	1161.1	1164.6
22.5°	1093.8	1100.9	1122.1	1138.1	1145.1
25°	1065.5	1072.6	1099.1	1115.0	1122.1
27.5°	1030.1	1040.7	1065.5	1088.5	1097.3
30°	994.7	1005.3	1033.6	1060.2	1070.8
32.5°	959.3	971.7	1001.8	1030.1	1042.5
35°	920.4	932.7	966.4	1000.0	1014.2
37.5°	879.6	895.6	931.0	968.1	984.1
40°	838.9	854.9	892.0	934.5	952.2
42.5°	805.3	812.4	854.9	900.9	918.6
45°	766.4	771.7	815.9	865.5	886.7
47.5°	709.7	729.2	777.0	831.9	853.1
50°	665.5	686.7	736.3	794.7	817.7
52.5°	628.3	642.5	697.3	755.8	782.3
55°	587.6	598.2	654.9	716.8	745.1
57.5°	538.1	557.5	614.2	677.9	706.2
60°	483.2	508.0	569.9	638.9	667.3
62.5°	447.8	461.9	529.2	598.2	630.1
65°	396.5	414.2	485.0	555.8	589.4
67.5°	354.0	371.7	444.2	515.0	548.7
70°	308.0	325.7	401.8	472.6	506.2
72.5°	254.9	279.6	359.3	430.1	465.5
75°	212.4	235.4	313.3	384.1	412.4
77.5°	164.6	194.7	267.3	325.7	346.9
80°	122.1	152.2	217.7	260.2	279.6
82.5°	83.2	113.3	162.8	194.7	205.3
85°	49.6	70.8	104.4	122.1	120.4
87.5°	23.0	30.1	42.5	42.5	40.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)