

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: P309058

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-S-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: P309058
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
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-S-CA08-W2A-U-6500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH 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: 3910.0 lumens
Efficiency: N/A
Efficacy: 115.7 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

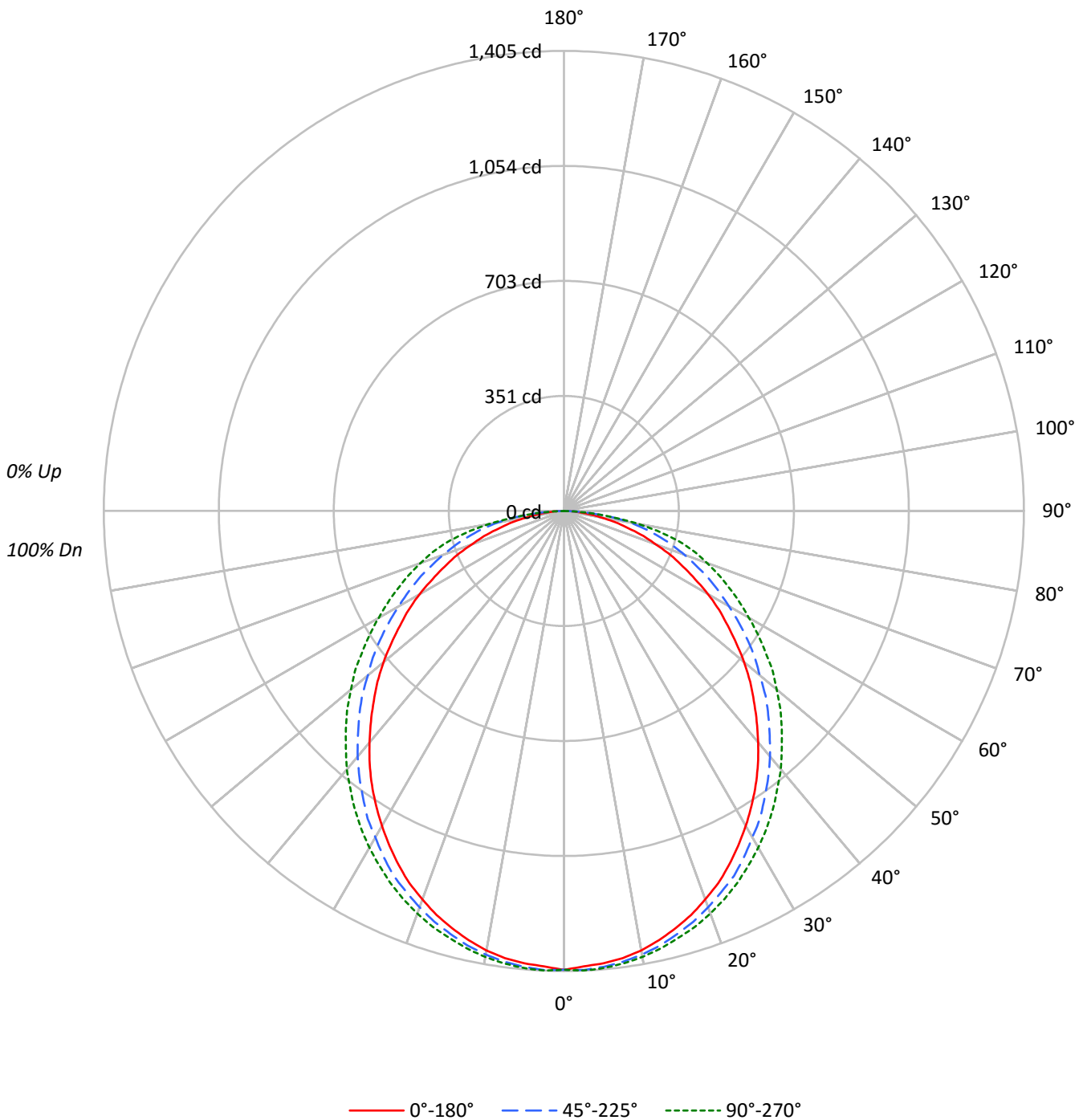
Input Watts (W): 33.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3770	3770	3770
5°	3745	3775	3785
10°	3724	3759	3778
15°	3675	3725	3761
20°	3615	3688	3746
25°	3543	3651	3721
30°	3452	3577	3690
35°	3356	3512	3656
40°	3243	3442	3621
45°	3124	3360	3582
50°	3009	3269	3551
55°	2867	3210	3526
60°	2739	3132	3515
65°	2555	3113	3554
70°	2354	3086	3660
75°	2124	3130	3850
80°	1838	3223	3618
85°	1522	2705	2705



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.5	3.4
10°-20°	377.1	9.6
20°-30°	564.2	14.4
30°-40°	668.1	17.1
40°-50°	680.9	17.4
50°-60°	610.3	15.6
60°-70°	477.8	12.2
70°-80°	308.1	7.9
80°-90°	91.0	2.3
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°	1073.7	27.5
0°-40°	1741.9	44.5
0°-60°	3033.1	77.6
0°-90°	3910.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3910.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1401	1401	1401	1401	1401	
5°	1386	1390	1397	1399	1401	132
15°	1319	1326	1337	1348	1350	372
25°	1193	1204	1230	1246	1253	549
35°	1022	1034	1069	1102	1113	638
45°	821	839	883	929	941	634
55°	611	631	684	732	752	548
65°	401	425	489	536	558	399
75°	204	235	301	352	370	219
85°	49	68	88	88	88	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1401.1	1401.1	1401.1	1401.1	1401.1
2.5°	1392.0	1395.6	1402.9	1404.7	1404.7
5°	1386.5	1390.1	1397.4	1399.3	1401.1
7.5°	1377.4	1379.2	1388.3	1392.0	1393.8
10°	1362.8	1366.4	1375.5	1381.0	1382.8
12.5°	1342.7	1348.2	1359.1	1366.4	1368.2
15°	1319.0	1326.3	1337.2	1348.2	1350.0
17.5°	1293.4	1300.7	1315.3	1328.1	1331.8
20°	1262.4	1271.5	1288.0	1302.6	1308.0
22.5°	1231.4	1238.7	1258.8	1277.0	1282.5
25°	1193.1	1204.0	1229.6	1246.0	1253.3
27.5°	1153.0	1165.7	1191.3	1213.2	1220.5
30°	1111.0	1123.8	1151.1	1178.5	1187.6
32.5°	1067.2	1081.8	1114.7	1142.0	1151.1
35°	1021.6	1034.4	1069.0	1101.9	1112.8
37.5°	974.2	985.1	1025.3	1059.9	1070.9
40°	923.1	937.7	979.7	1019.8	1030.7
42.5°	872.0	888.4	930.4	974.2	985.1
45°	820.9	839.2	883.0	928.6	941.3
47.5°	771.7	786.3	835.5	879.3	897.6
50°	718.8	733.4	780.8	830.1	848.3
52.5°	664.1	684.1	735.2	782.6	804.5
55°	611.1	631.2	684.1	731.6	751.6
57.5°	561.9	578.3	633.0	682.3	702.4
60°	509.0	523.6	582.0	634.9	653.1
62.5°	452.4	474.3	534.5	583.8	605.7
65°	401.3	425.1	488.9	536.3	558.2
67.5°	353.9	375.8	437.8	488.9	512.6
70°	299.2	328.4	392.2	443.3	465.2
72.5°	255.4	280.9	346.6	397.7	421.4
75°	204.3	235.3	301.0	352.1	370.3
77.5°	162.4	193.4	255.4	295.5	304.7
80°	118.6	149.6	208.0	228.0	233.5
82.5°	80.3	109.5	149.6	155.1	156.9
85°	49.3	67.5	87.6	87.6	87.6
87.5°	23.7	27.4	31.0	29.2	29.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)