

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: P312992

Luminaire Tested: **22FCZ2-39HE-UNV-L83050-S-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: P312992
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-L83050-S-CA08-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH 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: 3928.0 lumens
Efficiency: N/A
Efficacy: 118.7 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

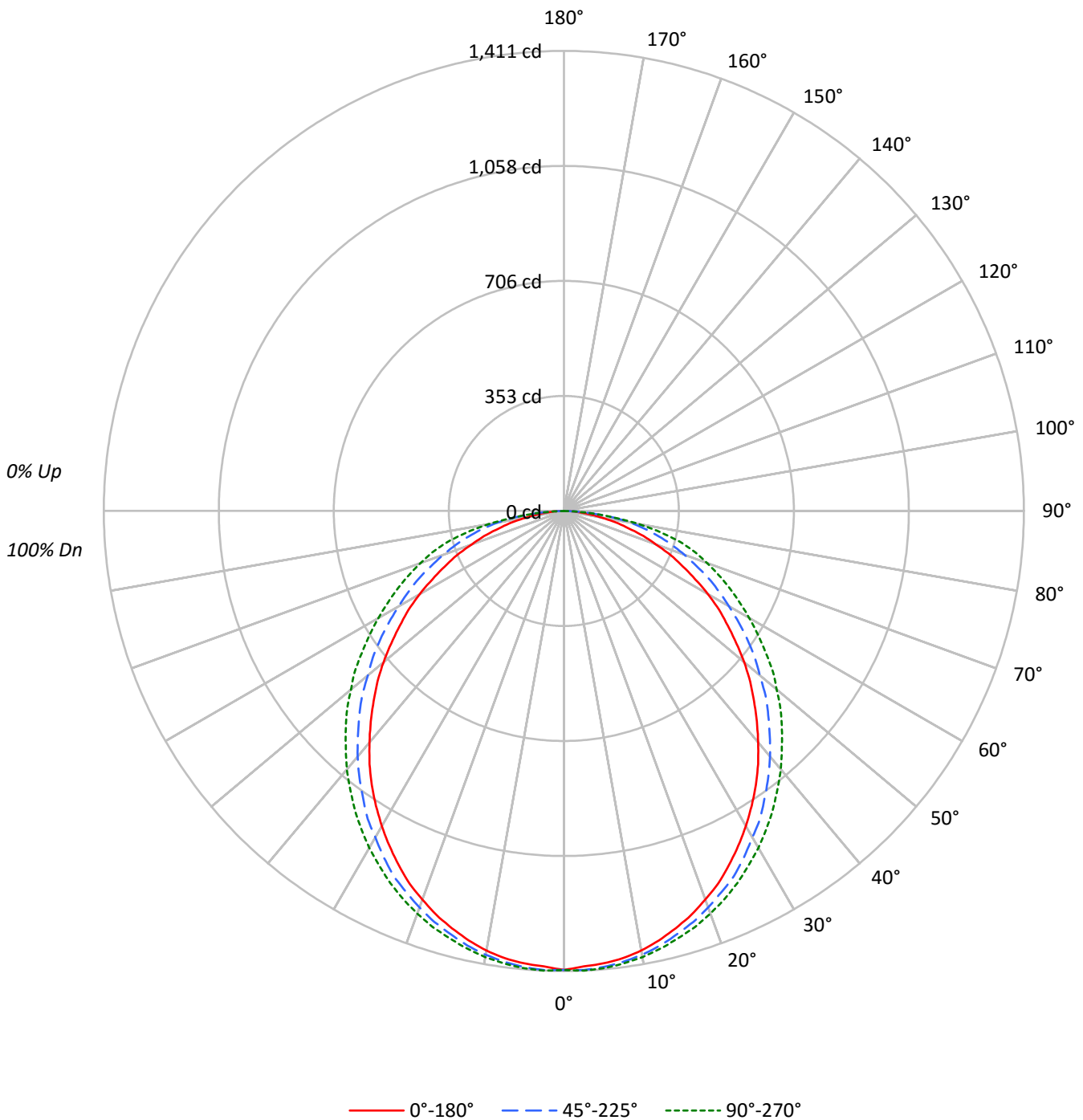
Input Watts (W): 33.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3788	3788	3788
5°	3763	3792	3802
10°	3741	3776	3796
15°	3692	3743	3778
20°	3632	3705	3763
25°	3559	3668	3738
30°	3468	3593	3707
35°	3371	3528	3673
40°	3258	3457	3638
45°	3138	3376	3599
50°	3023	3284	3568
55°	2881	3225	3543
60°	2752	3146	3531
65°	2567	3128	3571
70°	2365	3100	3677
75°	2135	3144	3868
80°	1846	3237	3636
85°	1528	2717	2717



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.1	3.4
10°-20°	378.8	9.6
20°-30°	566.8	14.4
30°-40°	671.2	17.1
40°-50°	684.0	17.4
50°-60°	613.1	15.6
60°-70°	480.0	12.2
70°-80°	309.5	7.9
80°-90°	91.4	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°	1078.7	27.5
0°-40°	1749.9	44.5
0°-60°	3047.1	77.6
0°-90°	3928.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3928.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1408	1408	1408	1408	1408	
5°	1393	1396	1404	1406	1408	132
15°	1325	1332	1343	1354	1356	374
25°	1199	1210	1235	1252	1259	552
35°	1026	1039	1074	1107	1118	641
45°	825	843	887	933	946	637
55°	614	634	687	735	755	550
65°	403	427	491	539	561	400
75°	205	236	302	354	372	220
85°	50	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°	1407.5	1407.5	1407.5	1407.5	1407.5
2.5°	1398.4	1402.0	1409.4	1411.2	1411.2
5°	1392.9	1396.5	1403.9	1405.7	1407.5
7.5°	1383.7	1385.5	1394.7	1398.4	1400.2
10°	1369.0	1372.7	1381.9	1387.4	1389.2
12.5°	1348.9	1354.4	1365.4	1372.7	1374.5
15°	1325.1	1332.4	1343.4	1354.4	1356.2
17.5°	1299.4	1306.7	1321.4	1334.2	1337.9
20°	1268.2	1277.4	1293.9	1308.6	1314.1
22.5°	1237.1	1244.4	1264.6	1282.9	1288.4
25°	1198.6	1209.6	1235.2	1251.7	1259.1
27.5°	1158.3	1171.1	1196.8	1218.8	1226.1
30°	1116.1	1129.0	1156.4	1183.9	1193.1
32.5°	1072.1	1086.8	1119.8	1147.3	1156.4
35°	1026.3	1039.1	1074.0	1107.0	1118.0
37.5°	978.7	989.7	1030.0	1064.8	1075.8
40°	927.4	942.0	984.2	1024.5	1035.5
42.5°	876.0	892.5	934.7	978.7	989.7
45°	824.7	843.0	887.0	932.9	945.7
47.5°	775.2	789.9	839.4	883.4	901.7
50°	722.1	736.8	784.4	833.9	852.2
52.5°	667.1	687.3	738.6	786.2	808.2
55°	614.0	634.1	687.3	734.9	755.1
57.5°	564.5	581.0	636.0	685.4	705.6
60°	511.3	526.0	584.6	637.8	656.1
62.5°	454.5	476.5	537.0	586.5	608.5
65°	403.2	427.0	491.2	538.8	560.8
67.5°	355.5	377.5	439.9	491.2	515.0
70°	300.6	329.9	394.0	445.3	467.3
72.5°	256.6	282.2	348.2	399.5	423.4
75°	205.3	236.4	302.4	353.7	372.0
77.5°	163.1	194.3	256.6	296.9	306.1
80°	119.1	150.3	208.9	229.1	234.6
82.5°	80.6	110.0	150.3	155.8	157.6
85°	49.5	67.8	88.0	88.0	88.0
87.5°	23.8	27.5	31.2	29.3	29.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)