

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: P309054

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-S-CA08-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: P309054
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-4500K
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: 3800.0 lumens
Efficiency: N/A
Efficacy: 115.2 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

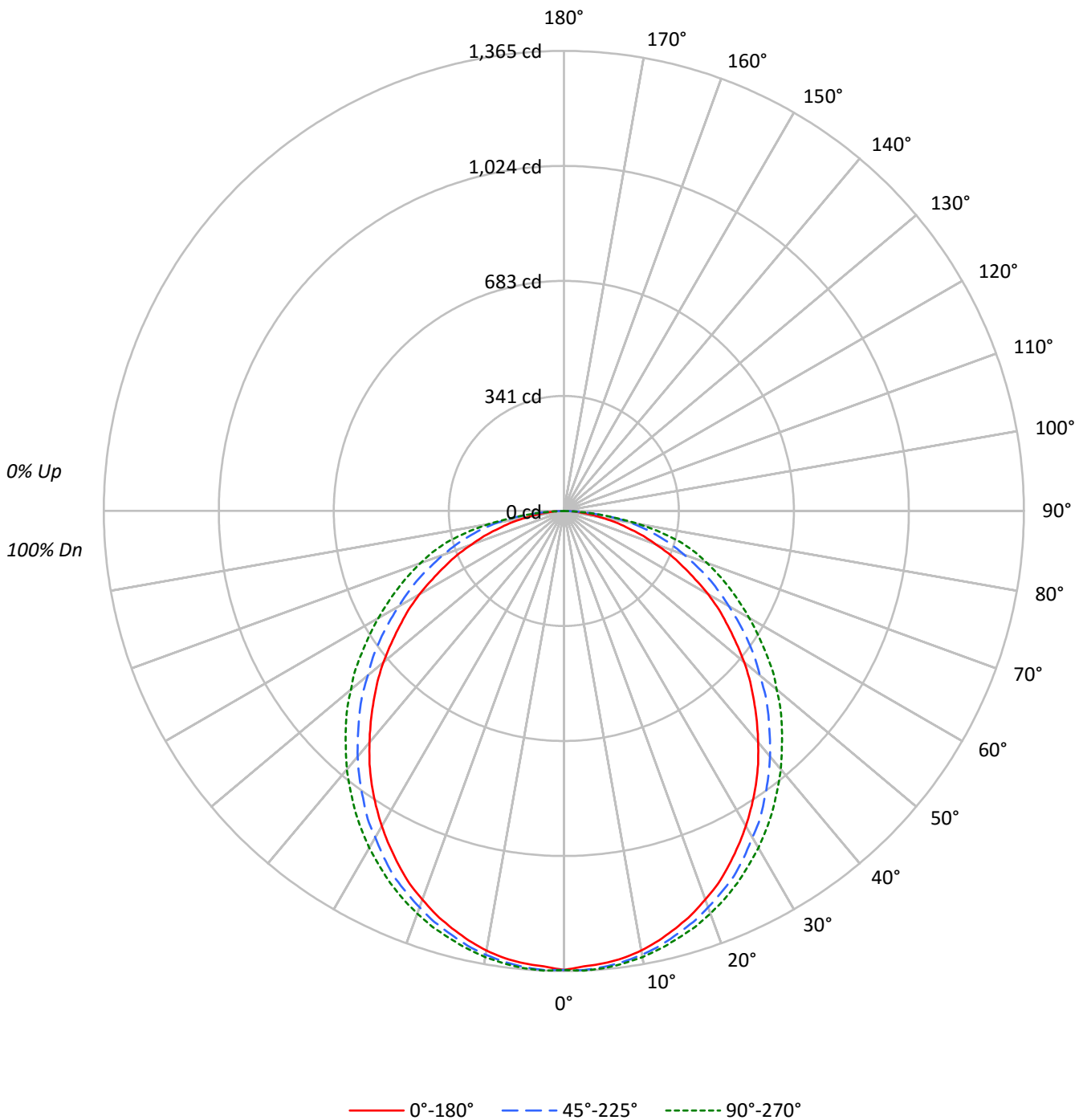
Input Watts (W): 33
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3664	3664	3664
5°	3640	3669	3678
10°	3619	3653	3672
15°	3571	3621	3655
20°	3513	3584	3640
25°	3443	3548	3616
30°	3355	3476	3586
35°	3262	3413	3553
40°	3151	3345	3519
45°	3036	3266	3482
50°	2925	3177	3451
55°	2787	3119	3427
60°	2662	3044	3416
65°	2484	3026	3454
70°	2288	2999	3557
75°	2065	3041	3742
80°	1785	3132	3516
85°	1479	2628	2628



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.8	3.4
10°-20°	366.5	9.6
20°-30°	548.3	14.4
30°-40°	649.3	17.1
40°-50°	661.8	17.4
50°-60°	593.1	15.6
60°-70°	464.4	12.2
70°-80°	299.4	7.9
80°-90°	88.5	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°	1043.5	27.5
0°-40°	1692.9	44.5
0°-60°	2947.7	77.6
0°-90°	3800.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3800.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1362	1362	1362	1362	1362	
5°	1348	1351	1358	1360	1362	128
15°	1282	1289	1300	1310	1312	361
25°	1160	1170	1195	1211	1218	534
35°	993	1005	1039	1071	1082	621
45°	798	816	858	902	915	616
55°	594	614	665	711	730	533
65°	390	413	475	521	542	387
75°	199	229	292	342	360	213
85°	48	66	85	85	85	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1361.7	1361.7	1361.7	1361.7	1361.7
2.5°	1352.8	1356.3	1363.4	1365.2	1365.2
5°	1347.5	1351.0	1358.1	1359.9	1361.7
7.5°	1338.6	1340.4	1349.2	1352.8	1354.6
10°	1324.4	1328.0	1336.8	1342.2	1343.9
12.5°	1304.9	1310.2	1320.9	1328.0	1329.7
15°	1281.9	1289.0	1299.6	1310.2	1312.0
17.5°	1257.1	1264.1	1278.3	1290.7	1294.3
20°	1226.9	1235.8	1251.7	1265.9	1271.2
22.5°	1196.8	1203.9	1223.4	1241.1	1246.4
25°	1159.5	1170.2	1195.0	1211.0	1218.0
27.5°	1120.5	1132.9	1157.8	1179.0	1186.1
30°	1079.8	1092.2	1118.8	1145.4	1154.2
32.5°	1037.2	1051.4	1083.3	1109.9	1118.8
35°	992.9	1005.3	1039.0	1070.9	1081.5
37.5°	946.8	957.4	996.4	1030.1	1040.7
40°	897.1	911.3	952.1	991.1	1001.7
42.5°	847.5	863.4	904.2	946.8	957.4
45°	797.8	815.6	858.1	902.5	914.9
47.5°	750.0	764.2	812.0	854.6	872.3
50°	698.6	712.7	758.8	806.7	824.4
52.5°	645.4	664.9	714.5	760.6	781.9
55°	594.0	613.5	664.9	711.0	730.5
57.5°	546.1	562.0	615.2	663.1	682.6
60°	494.7	508.8	565.6	617.0	634.7
62.5°	439.7	461.0	519.5	567.4	588.6
65°	390.1	413.1	475.2	521.3	542.5
67.5°	344.0	365.2	425.5	475.2	498.2
70°	290.8	319.1	381.2	430.8	452.1
72.5°	248.2	273.0	336.9	386.5	409.6
75°	198.6	228.7	292.5	342.2	359.9
77.5°	157.8	187.9	248.2	287.2	296.1
80°	115.2	145.4	202.1	221.6	226.9
82.5°	78.0	106.4	145.4	150.7	152.5
85°	47.9	65.6	85.1	85.1	85.1
87.5°	23.0	26.6	30.1	28.4	28.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)