

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: P309132

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-S-CP250-W2A-U-3000K**

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: P309132
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: 22FCZ2-44HE-UNV-L82765-S-CP250-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB 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: 3677.0 lumens
Efficiency: N/A
Efficacy: 99.6 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

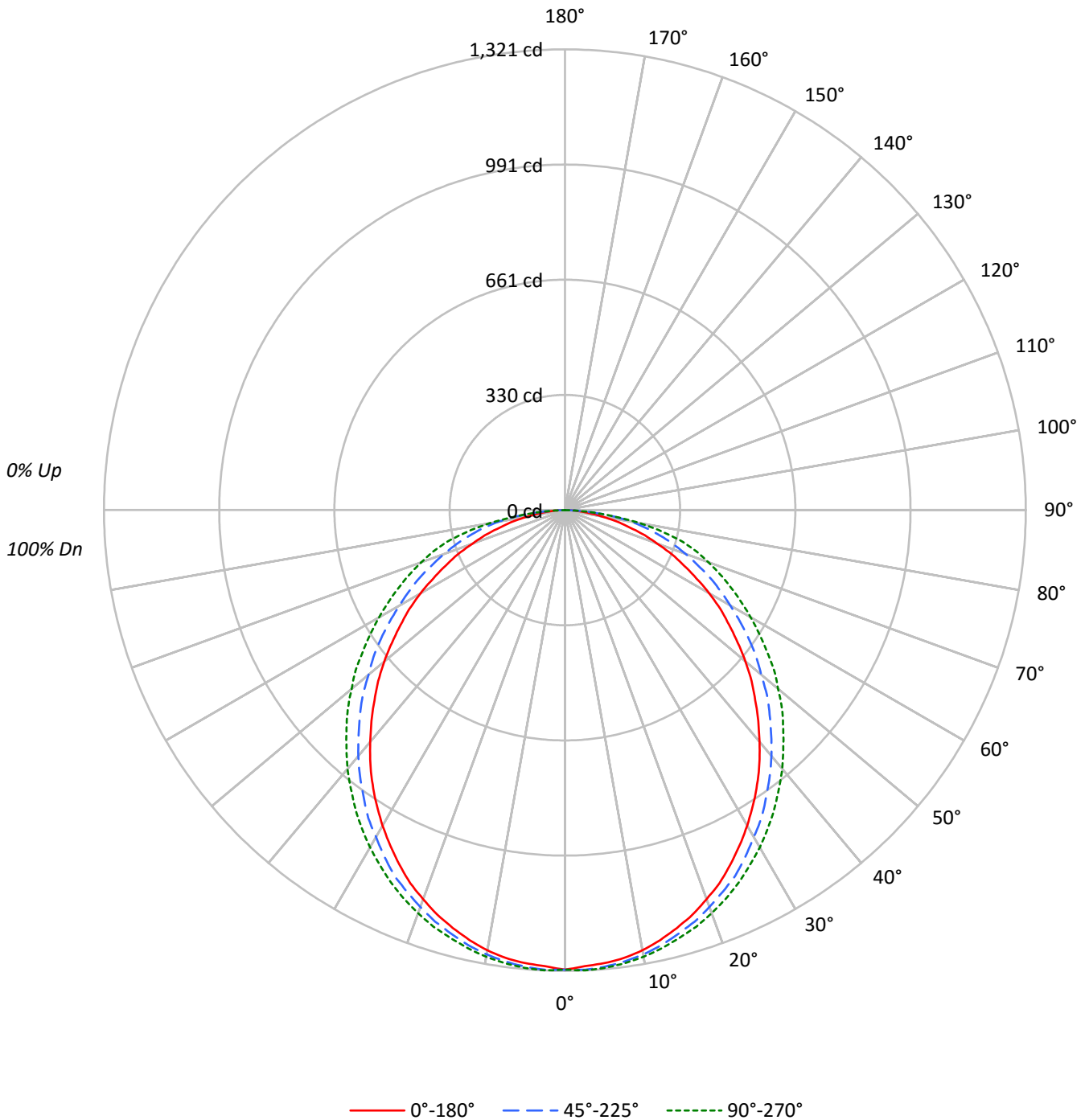
Input Watts (W): 36.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	108	103	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83				83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69				69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58				58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49				49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43				43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37				37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33				33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30				30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27				27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24				24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3546	3546	3546
5°	3522	3550	3559
10°	3502	3535	3553
15°	3456	3503	3537
20°	3400	3468	3523
25°	3331	3433	3499
30°	3246	3364	3471
35°	3156	3302	3438
40°	3049	3236	3405
45°	2938	3160	3369
50°	2830	3074	3340
55°	2696	3019	3316
60°	2576	2946	3306
65°	2403	2928	3343
70°	2214	2902	3442
75°	1997	2943	3621
80°	1728	3031	3403
85°	1430	2541	2541



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.6	3.4
10°-20°	354.6	9.6
20°-30°	530.6	14.4
30°-40°	628.3	17.1
40°-50°	640.3	17.4
50°-60°	573.9	15.6
60°-70°	449.3	12.2
70°-80°	289.8	7.9
80°-90°	85.6	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°	1009.8	27.5
0°-40°	1638.1	44.5
0°-60°	2852.3	77.6
0°-90°	3677.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3677.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1318	1318	1318	1318	1318	
5°	1304	1307	1314	1316	1318	124
15°	1240	1247	1258	1268	1270	350
25°	1122	1132	1156	1172	1179	516
35°	961	973	1005	1036	1046	600
45°	772	789	830	873	885	596
55°	575	594	643	688	707	515
65°	377	400	460	504	525	375
75°	192	221	283	331	348	206
85°	46	64	82	82	82	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1317.6	1317.6	1317.6	1317.6	1317.6
2.5°	1309.0	1312.4	1319.3	1321.0	1321.0
5°	1303.9	1307.3	1314.2	1315.9	1317.6
7.5°	1295.3	1297.0	1305.6	1309.0	1310.7
10°	1281.6	1285.0	1293.6	1298.7	1300.4
12.5°	1262.7	1267.8	1278.1	1285.0	1286.7
15°	1240.4	1247.2	1257.5	1267.8	1269.5
17.5°	1216.4	1223.2	1237.0	1249.0	1252.4
20°	1187.2	1195.8	1211.2	1224.9	1230.1
22.5°	1158.0	1164.9	1183.8	1200.9	1206.1
25°	1122.0	1132.3	1156.3	1171.8	1178.6
27.5°	1084.3	1096.3	1120.3	1140.9	1147.7
30°	1044.8	1056.8	1082.5	1108.3	1116.9
32.5°	1003.6	1017.4	1048.2	1074.0	1082.5
35°	960.7	972.7	1005.3	1036.2	1046.5
37.5°	916.1	926.4	964.2	996.8	1007.1
40°	868.1	881.8	921.3	959.0	969.3
42.5°	820.1	835.5	875.0	916.1	926.4
45°	772.0	789.2	830.4	873.2	885.3
47.5°	725.7	739.4	785.7	826.9	844.1
50°	675.9	689.7	734.3	780.6	797.8
52.5°	624.5	643.4	691.4	736.0	756.6
55°	574.7	593.6	643.4	688.0	706.8
57.5°	528.4	543.8	595.3	641.6	660.5
60°	478.7	492.4	547.3	597.0	614.2
62.5°	425.5	446.1	502.7	549.0	569.6
65°	377.4	399.7	459.8	504.4	525.0
67.5°	332.8	353.4	411.7	459.8	482.1
70°	281.4	308.8	368.9	416.9	437.5
72.5°	240.2	264.2	326.0	374.0	396.3
75°	192.1	221.3	283.1	331.1	348.3
77.5°	152.7	181.9	240.2	277.9	286.5
80°	111.5	140.7	195.6	214.5	219.6
82.5°	75.5	102.9	140.7	145.8	147.5
85°	46.3	63.5	82.3	82.3	82.3
87.5°	22.3	25.7	29.2	27.4	27.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)