

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: P312403

Luminaire Tested: **14FCZ2-39-UNV-L83050-S-CP125-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: P312403
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-40)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-39-UNV-L83050-S-CP125-W2A-U-4500K
Description: 1'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (168) 4500K 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: 3890.0 lumens
Efficiency: N/A
Efficacy: 111.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.26 / 1.36
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

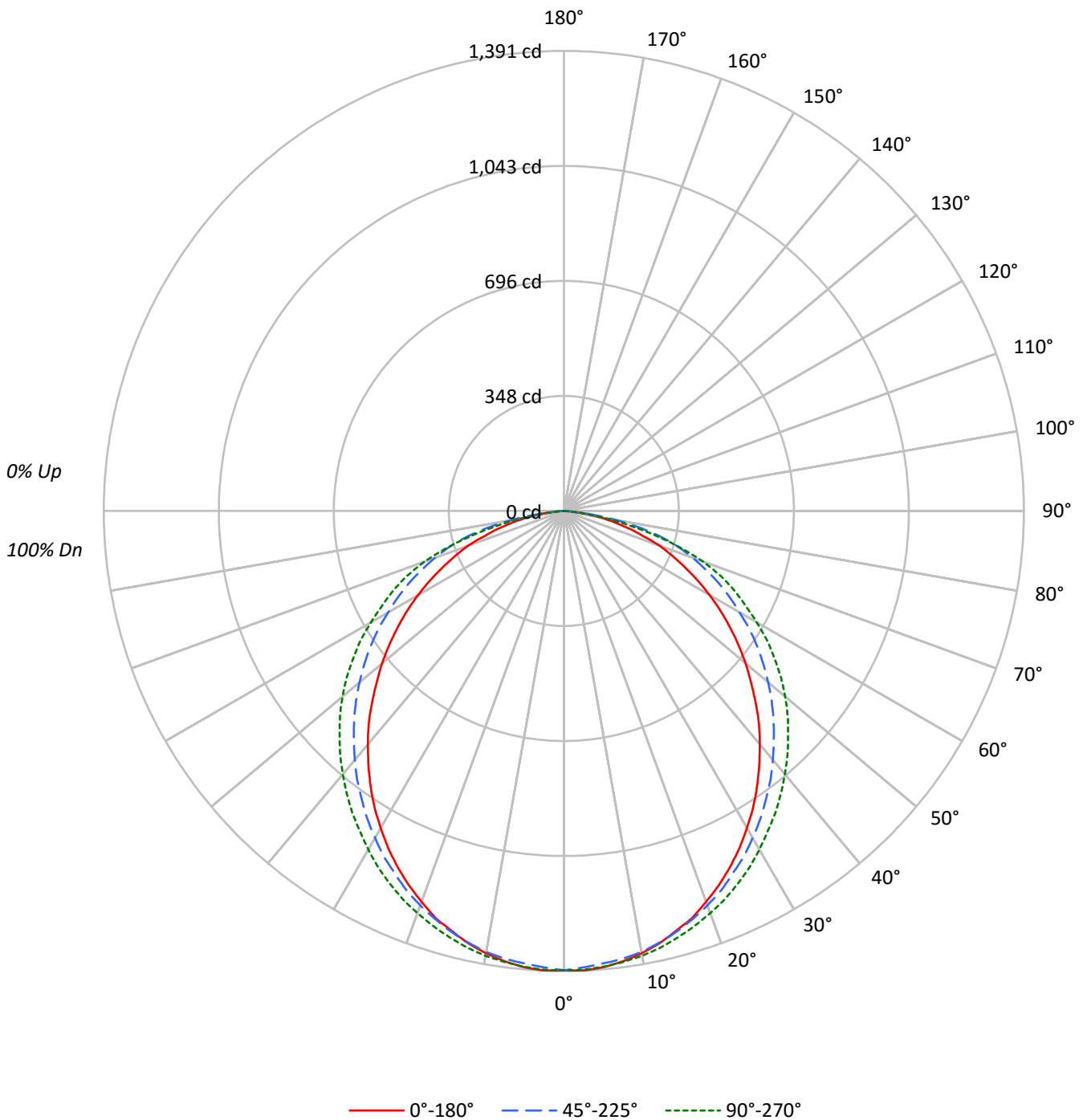
Input Watts (W): 34.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	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	52	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3737	3737	3737
5°	3741	3709	3736
10°	3710	3700	3731
15°	3659	3670	3718
20°	3601	3634	3706
25°	3528	3591	3694
30°	3440	3548	3674
35°	3346	3497	3662
40°	3238	3455	3652
45°	3119	3413	3648
50°	3004	3375	3658
55°	2877	3348	3647
60°	2740	3301	3623
65°	2579	3291	3623
70°	2428	3263	3521
75°	2105	3189	3008
80°	1703	2571	2002
85°	1130	892	596



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.1	3.4
10°-20°	373.1	9.6
20°-30°	559.7	14.4
30°-40°	667.7	17.2
40°-50°	690.3	17.7
50°-60°	630.2	16.2
60°-70°	496.0	12.7
70°-80°	288.7	7.4
80°-90°	53.2	1.4
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°	1064.0	27.4
0°-40°	1731.7	44.5
0°-60°	3052.2	78.5
0°-90°	3890.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3890.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1389	1389	1389	1389	1389	
5°	1385	1381	1373	1385	1383	131
15°	1313	1315	1317	1335	1335	371
25°	1188	1194	1209	1238	1244	547
35°	1018	1032	1065	1105	1115	637
45°	820	847	897	947	959	633
55°	613	646	714	766	777	548
65°	405	448	517	557	569	402
75°	202	251	307	301	289	215
85°	37	52	29	23	19	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1388.7	1388.7	1388.7	1388.7	1388.7
2.5°	1390.6	1386.7	1381.0	1390.6	1388.7
5°	1384.8	1381.0	1373.2	1384.8	1382.9
7.5°	1373.2	1369.4	1365.5	1377.1	1375.2
10°	1357.8	1355.9	1353.9	1367.4	1365.5
12.5°	1338.5	1338.5	1336.6	1352.0	1352.0
15°	1313.4	1315.4	1317.3	1334.7	1334.7
17.5°	1290.3	1288.4	1294.2	1313.4	1315.4
20°	1257.5	1261.4	1269.1	1292.2	1294.2
22.5°	1224.7	1228.6	1242.1	1265.2	1271.0
25°	1188.1	1193.9	1209.3	1238.2	1244.0
27.5°	1149.5	1157.2	1178.4	1209.3	1215.1
30°	1107.1	1118.6	1141.8	1176.5	1182.3
32.5°	1064.6	1076.2	1105.1	1139.9	1147.6
35°	1018.4	1031.9	1064.6	1105.1	1114.8
37.5°	970.1	987.5	1026.1	1066.6	1078.1
40°	921.9	941.2	983.6	1026.1	1039.6
42.5°	873.7	893.0	939.3	987.5	1001.0
45°	819.7	846.7	896.8	947.0	958.6
47.5°	767.6	796.6	852.5	902.6	918.1
50°	717.5	746.4	806.2	858.3	873.7
52.5°	665.4	696.3	759.9	813.9	827.4
55°	613.3	646.1	713.6	765.7	777.3
57.5°	561.3	596.0	665.4	715.5	729.0
60°	509.2	545.8	613.3	663.5	673.1
62.5°	457.1	495.7	565.1	609.5	619.1
65°	405.0	447.5	516.9	557.4	569.0
67.5°	354.9	397.3	464.8	503.4	513.0
70°	308.6	347.2	414.7	443.6	447.5
72.5°	250.7	298.9	364.5	380.0	370.3
75°	202.5	250.7	306.7	300.9	289.3
77.5°	154.3	202.5	239.2	219.9	204.4
80°	109.9	158.2	165.9	136.9	129.2
82.5°	71.4	109.9	92.6	71.4	57.9
85°	36.6	52.1	28.9	23.1	19.3
87.5°	11.6	7.7	3.9	3.9	1.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)