

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: P309076

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-S-CP125-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: P309076
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-CP125-W2A-U-6500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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: 3820.0 lumens
Efficiency: N/A
Efficacy: 113.0 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

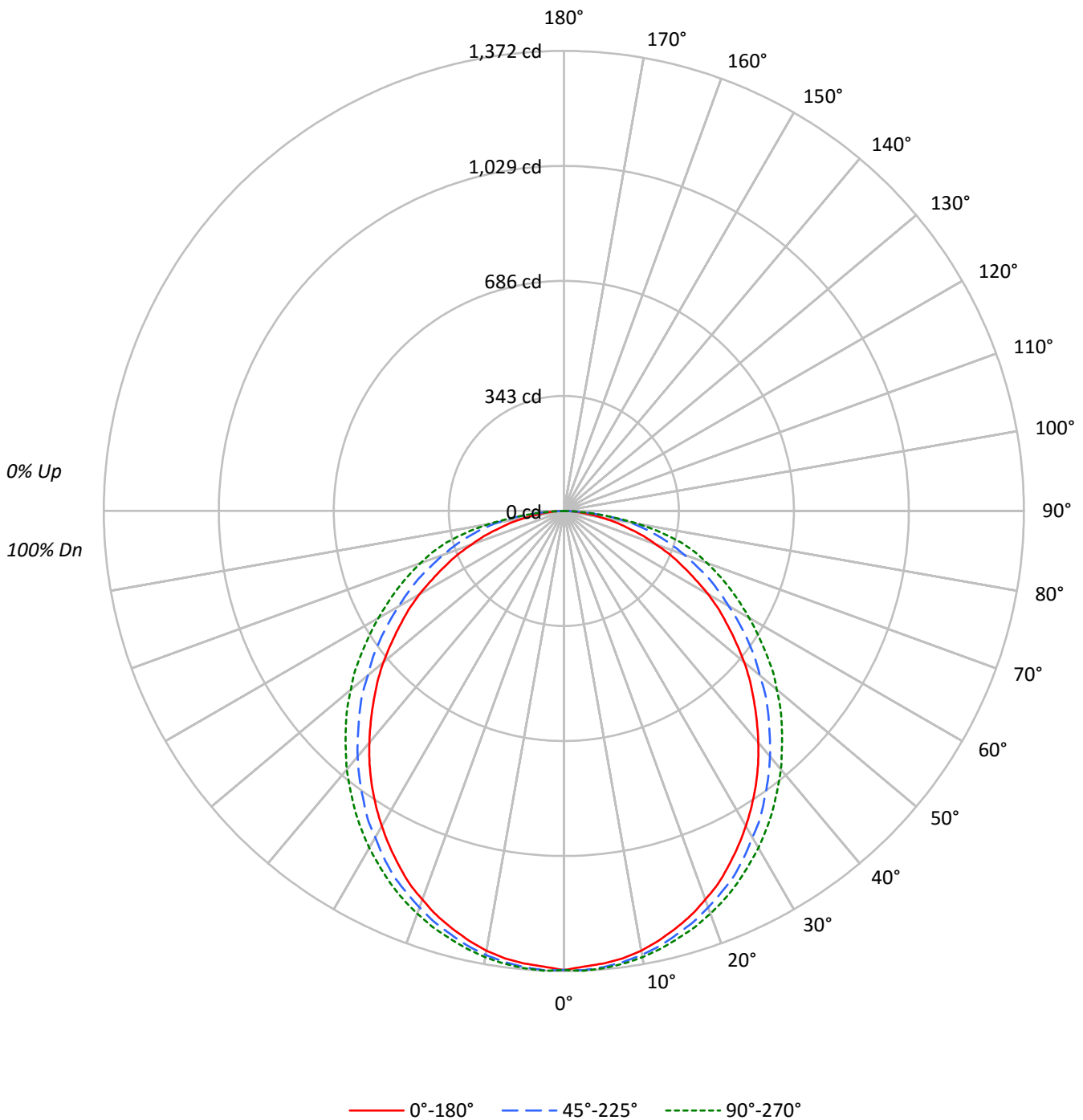
Input Watts (W): 33.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3683	3683	3683
5°	3659	3688	3697
10°	3638	3672	3692
15°	3590	3640	3674
20°	3532	3603	3659
25°	3461	3567	3636
30°	3373	3494	3605
35°	3279	3431	3572
40°	3168	3362	3537
45°	3052	3283	3500
50°	2940	3193	3470
55°	2801	3136	3445
60°	2676	3060	3434
65°	2497	3042	3473
70°	2300	3015	3576
75°	2075	3058	3762
80°	1796	3149	3535
85°	1485	2643	2643



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.4	3.4
10°-20°	368.4	9.6
20°-30°	551.2	14.4
30°-40°	652.8	17.1
40°-50°	665.2	17.4
50°-60°	596.2	15.6
60°-70°	466.8	12.2
70°-80°	301.0	7.9
80°-90°	88.9	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°	1049.0	27.5
0°-40°	1701.8	44.5
0°-60°	2963.3	77.6
0°-90°	3820.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3820.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1369	1369	1369	1369	1369	
5°	1355	1358	1365	1367	1369	129
15°	1289	1296	1306	1317	1319	363
25°	1166	1176	1201	1217	1224	537
35°	998	1011	1044	1076	1087	624
45°	802	820	863	907	920	619
55°	597	617	668	715	734	535
65°	392	415	478	524	545	390
75°	200	230	294	344	362	214
85°	48	66	86	86	86	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1368.8	1368.8	1368.8	1368.8	1368.8
2.5°	1359.9	1363.5	1370.6	1372.4	1372.4
5°	1354.6	1358.1	1365.3	1367.0	1368.8
7.5°	1345.7	1347.4	1356.3	1359.9	1361.7
10°	1331.4	1335.0	1343.9	1349.2	1351.0
12.5°	1311.8	1317.1	1327.8	1335.0	1336.7
15°	1288.6	1295.7	1306.4	1317.1	1318.9
17.5°	1263.7	1270.8	1285.1	1297.5	1301.1
20°	1233.4	1242.3	1258.3	1272.6	1277.9
22.5°	1203.1	1210.2	1229.8	1247.6	1253.0
25°	1165.6	1176.3	1201.3	1217.3	1224.5
27.5°	1126.4	1138.9	1163.9	1185.2	1192.4
30°	1085.4	1097.9	1124.6	1151.4	1160.3
32.5°	1042.7	1056.9	1089.0	1115.7	1124.6
35°	998.1	1010.6	1044.4	1076.5	1087.2
37.5°	951.8	962.5	1001.7	1035.5	1046.2
40°	901.9	916.1	957.1	996.3	1007.0
42.5°	852.0	868.0	909.0	951.8	962.5
45°	802.0	819.9	862.6	907.2	919.7
47.5°	753.9	768.2	816.3	859.1	876.9
50°	702.2	716.5	762.8	811.0	828.8
52.5°	648.8	668.4	718.3	764.6	786.0
55°	597.1	616.7	668.4	714.7	734.3
57.5°	549.0	565.0	618.5	666.6	686.2
60°	497.3	511.5	568.6	620.2	638.1
62.5°	442.0	463.4	522.2	570.3	591.7
65°	392.1	415.3	477.7	524.0	545.4
67.5°	345.8	367.2	427.8	477.7	500.8
70°	292.3	320.8	383.2	433.1	454.5
72.5°	249.5	274.5	338.6	388.5	411.7
75°	199.6	229.9	294.1	344.0	361.8
77.5°	158.6	188.9	249.5	288.7	297.6
80°	115.9	146.2	203.2	222.8	228.1
82.5°	78.4	106.9	146.2	151.5	153.3
85°	48.1	65.9	85.6	85.6	85.6
87.5°	23.2	26.7	30.3	28.5	28.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)