

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: P309136

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-S-CP250-W2A-U-5000K**

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: P309136
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-5000K
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: 4010.0 lumens
Efficiency: N/A
Efficacy: 105.2 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

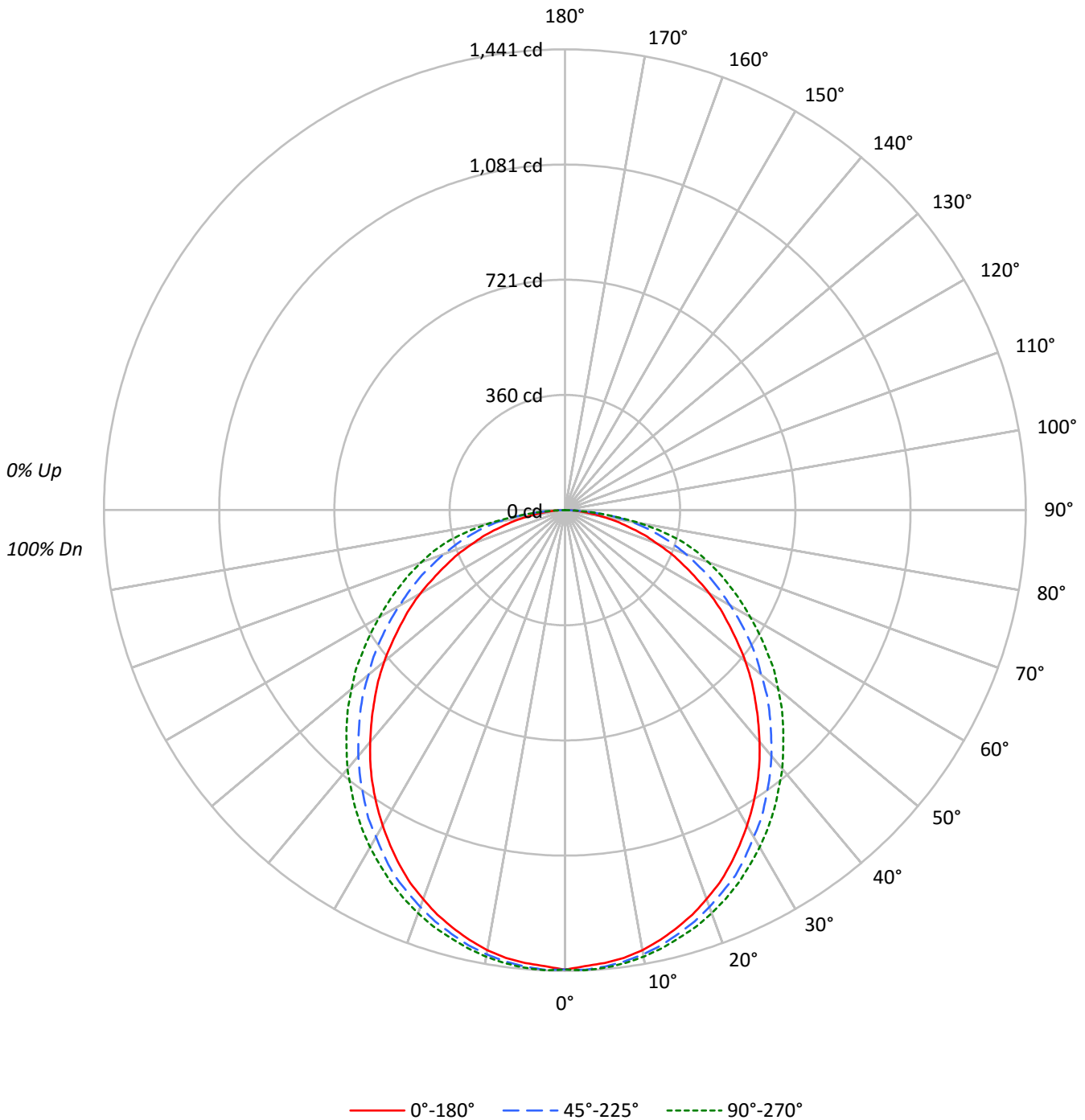
Input Watts (W): 38.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3867	3867	3867
5°	3841	3871	3881
10°	3819	3855	3875
15°	3768	3821	3857
20°	3708	3783	3842
25°	3633	3744	3817
30°	3540	3668	3785
35°	3442	3602	3749
40°	3326	3529	3713
45°	3204	3446	3674
50°	3086	3352	3642
55°	2941	3292	3616
60°	2809	3212	3605
65°	2621	3193	3645
70°	2414	3165	3754
75°	2178	3210	3949
80°	1884	3305	3711
85°	1559	2773	2773



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.9	3.4
10°-20°	386.7	9.6
20°-30°	578.6	14.4
30°-40°	685.2	17.1
40°-50°	698.3	17.4
50°-60°	625.9	15.6
60°-70°	490.0	12.2
70°-80°	316.0	7.9
80°-90°	93.3	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°	1101.2	27.5
0°-40°	1786.4	44.5
0°-60°	3110.6	77.6
0°-90°	4010.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4010.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1437	1437	1437	1437	1437	
5°	1422	1426	1433	1435	1437	135
15°	1353	1360	1371	1383	1384	381
25°	1224	1235	1261	1278	1285	563
35°	1048	1061	1096	1130	1141	655
45°	842	861	906	952	965	650
55°	627	647	702	750	771	562
65°	412	436	501	550	572	409
75°	210	241	309	361	380	225
85°	50	69	90	90	90	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1436.9	1436.9	1436.9	1436.9	1436.9
2.5°	1427.6	1431.3	1438.8	1440.6	1440.6
5°	1421.9	1425.7	1433.2	1435.0	1436.9
7.5°	1412.6	1414.5	1423.8	1427.6	1429.4
10°	1397.6	1401.4	1410.7	1416.3	1418.2
12.5°	1377.0	1382.6	1393.9	1401.4	1403.2
15°	1352.7	1360.2	1371.4	1382.6	1384.5
17.5°	1326.5	1334.0	1349.0	1362.1	1365.8
20°	1294.7	1304.1	1320.9	1335.9	1341.5
22.5°	1262.9	1270.4	1291.0	1309.7	1315.3
25°	1223.6	1234.8	1261.0	1277.9	1285.4
27.5°	1182.5	1195.6	1221.7	1244.2	1251.7
30°	1139.4	1152.5	1180.6	1208.6	1218.0
32.5°	1094.5	1109.5	1143.2	1171.2	1180.6
35°	1047.7	1060.8	1096.4	1130.1	1141.3
37.5°	999.1	1010.3	1051.5	1087.0	1098.3
40°	946.7	961.7	1004.7	1045.9	1057.1
42.5°	894.3	911.2	954.2	999.1	1010.3
45°	841.9	860.6	905.6	952.3	965.4
47.5°	791.4	806.4	856.9	901.8	920.5
50°	737.2	752.1	800.8	851.3	870.0
52.5°	681.0	701.6	754.0	802.6	825.1
55°	626.8	647.4	701.6	750.3	770.8
57.5°	576.3	593.1	649.2	699.7	720.3
60°	522.0	537.0	596.8	651.1	669.8
62.5°	464.0	486.5	548.2	598.7	621.2
65°	411.6	435.9	501.4	550.1	572.5
67.5°	363.0	385.4	449.0	501.4	525.7
70°	306.8	336.8	402.3	454.6	477.1
72.5°	261.9	288.1	355.5	407.9	432.2
75°	209.5	241.4	308.7	361.1	379.8
77.5°	166.5	198.3	261.9	303.1	312.5
80°	121.6	153.4	213.3	233.9	239.5
82.5°	82.3	112.3	153.4	159.0	160.9
85°	50.5	69.2	89.8	89.8	89.8
87.5°	24.3	28.1	31.8	29.9	29.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)