

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: P308867

Luminaire Tested: **22FCZ2-44HE-UNV-L82765-CP250-W2A-U-5500K**

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: P308867
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
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-CP250-W2A-U-5500K
Description: 2'X2' TROFFER LED MODULE, RIBBED 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: 3840.0 lumens
Efficiency: N/A
Efficacy: 100.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

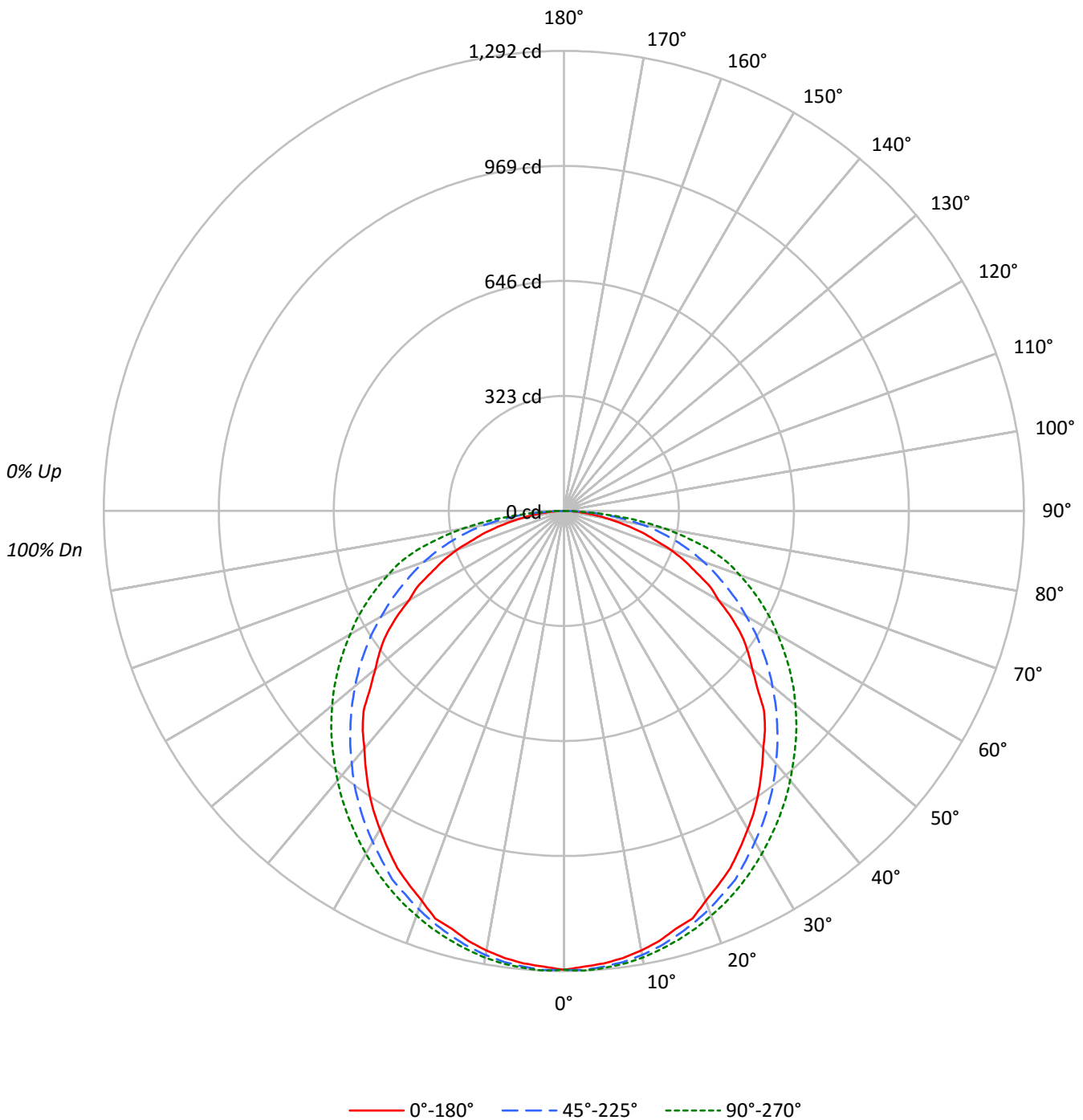
Input Watts (W): 38.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3467	3467	3467
5°	3445	3470	3480
10°	3425	3460	3480
15°	3384	3436	3472
20°	3337	3410	3463
25°	3285	3389	3460
30°	3210	3335	3455
35°	3140	3297	3460
40°	3060	3254	3473
45°	3029	3225	3504
50°	2893	3201	3555
55°	2863	3190	3630
60°	2700	3185	3729
65°	2621	3207	3897
70°	2516	3282	4135
75°	2293	3382	4452
80°	1965	3504	4500
85°	1590	3347	3859



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.9	3.2
10°-20°	347.8	9.1
20°-30°	523.4	13.6
30°-40°	628.2	16.4
40°-50°	656.6	17.1
50°-60°	611.9	15.9
60°-70°	501.9	13.1
70°-80°	338.2	8.8
80°-90°	110.1	2.9
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°	993.1	25.9
0°-40°	1621.3	42.2
0°-60°	2889.8	75.3
0°-90°	3840.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3840.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1288	1288	1288	1288	1288	
5°	1276	1279	1285	1286	1288	121
15°	1215	1222	1233	1244	1246	343
25°	1106	1114	1141	1158	1165	509
35°	956	969	1004	1038	1053	598
45°	796	801	847	899	921	608
55°	610	621	680	744	774	541
65°	412	430	504	577	612	410
75°	220	244	325	399	428	232
85°	52	74	108	127	125	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1288.4	1288.4	1288.4	<i>1288.4</i>	1288.4
2.5°	<i>1281.0</i>	<i>1284.7</i>	<i>1290.2</i>	<i>1292.0</i>	<i>1292.0</i>
5°	1275.5	1279.2	1284.7	<i>1286.5</i>	1288.4
7.5°	1266.3	1270.0	1277.3	<i>1281.0</i>	1282.8
10°	1253.4	1257.1	1266.3	<i>1271.8</i>	1273.6
12.5°	1236.9	1240.6	1251.6	<i>1258.9</i>	1260.8
15°	1214.8	1222.2	1233.2	<i>1244.2</i>	1246.1
17.5°	1200.1	1198.3	1213.0	<i>1225.9</i>	1229.5
20°	1165.2	1174.4	1190.9	<i>1205.6</i>	1209.3
22.5°	1135.8	1143.2	1165.2	<i>1181.8</i>	1189.1
25°	1106.4	1113.8	1141.3	<i>1157.9</i>	1165.2
27.5°	1069.6	1080.7	1106.4	<i>1130.3</i>	1139.5
30°	1032.9	1043.9	1073.3	<i>1100.9</i>	1111.9
32.5°	996.1	1009.0	1040.2	<i>1069.6</i>	1082.5
35°	955.7	968.6	1003.5	<i>1038.4</i>	1053.1
37.5°	913.4	930.0	966.7	<i>1005.3</i>	1021.9
40°	871.2	887.7	926.3	<i>970.4</i>	988.8
42.5°	836.2	843.6	887.7	<i>935.5</i>	953.9
45°	795.8	801.3	847.3	<i>898.7</i>	920.8
47.5°	737.0	757.2	806.8	<i>863.8</i>	885.9
50°	691.0	713.1	764.6	<i>825.2</i>	849.1
52.5°	652.4	667.1	724.1	<i>784.8</i>	812.3
55°	610.2	621.2	680.0	<i>744.3</i>	773.7
57.5°	558.7	578.9	637.7	<i>703.9</i>	733.3
60°	501.7	527.5	591.8	<i>663.5</i>	692.9
62.5°	465.0	479.7	549.5	<i>621.2</i>	654.3
65°	411.7	430.1	503.6	<i>577.1</i>	612.0
67.5°	367.6	386.0	461.3	<i>534.8</i>	569.7
70°	319.8	338.2	417.2	<i>490.7</i>	525.6
72.5°	264.7	290.4	373.1	<i>446.6</i>	483.4
75°	220.5	244.4	325.3	<i>398.8</i>	428.2
77.5°	170.9	202.2	277.5	<i>338.2</i>	360.2
80°	126.8	158.1	226.1	<i>270.2</i>	290.4
82.5°	86.4	117.6	169.1	<i>202.2</i>	213.2
85°	51.5	73.5	108.4	<i>126.8</i>	125.0
87.5°	23.9	31.2	44.1	<i>44.1</i>	42.3
90°	0.0	0.0	0.0	<i>0.0</i>	0.0

(END OF REPORT)