

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: P310218

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-RDP-CP250-W2A-U-5700K**

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: P310218
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-50HE-UNV-L82765-RDP-CP250-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 5700K 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: 2990.0 lumens
Efficiency: N/A
Efficacy: 75.7 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

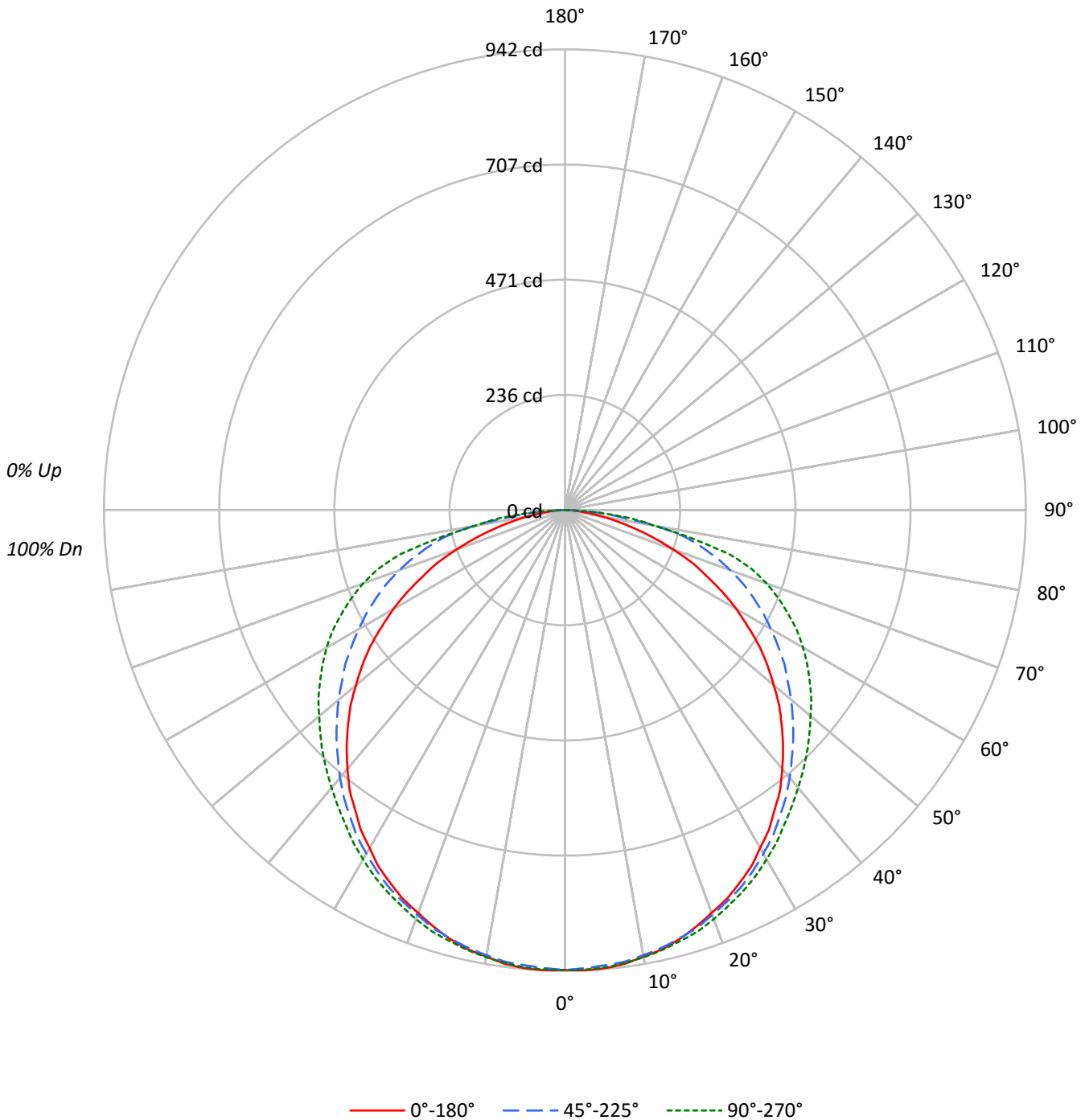
Input Watts (W): 39.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1265	1265	1265
5°	1270	1262	1268
10°	1266	1262	1268
15°	1264	1262	1271
20°	1255	1261	1274
25°	1251	1264	1277
30°	1240	1260	1281
35°	1228	1257	1286
40°	1214	1255	1302
45°	1194	1256	1332
50°	1167	1263	1372
55°	1138	1284	1433
60°	1090	1309	1513
65°	1020	1355	1605
70°	928	1418	1727
75°	787	1496	1804
80°	621	1506	1460
85°	459	1145	1283



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.2	3.0
10°-20°	256.7	8.6
20°-30°	392.5	13.1
30°-40°	479.9	16.0
40°-50°	511.5	17.1
50°-60°	489.0	16.4
60°-70°	414.3	13.9
70°-80°	278.4	9.3
80°-90°	78.5	2.6
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°	738.4	24.7
0°-40°	1218.3	40.7
0°-60°	2218.8	74.2
0°-90°	2990.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2990.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	940	940	940	940	940	
5°	940	939	934	939	939	89
15°	908	908	906	914	912	256
25°	842	845	851	859	860	388
35°	748	753	765	780	783	468
45°	627	638	660	688	700	484
55°	485	503	547	590	611	432
65°	320	353	426	482	504	318
75°	151	206	288	337	347	162
85°	30	61	74	80	83	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	940.3	940.3	940.3	940.3	940.3
2.5°	941.8	941.8	937.3	940.3	940.3
5°	940.3	938.8	934.3	938.8	938.8
7.5°	935.8	934.3	931.4	935.8	934.3
10°	926.9	926.9	924.0	928.4	928.4
12.5°	919.5	918.0	916.5	922.5	921.0
15°	907.6	907.6	906.2	913.6	912.1
17.5°	892.8	894.3	895.8	901.7	903.2
20°	876.5	879.5	880.9	889.8	889.8
22.5°	861.7	863.1	866.1	875.0	875.0
25°	842.4	845.4	851.3	858.7	860.2
27.5°	823.1	824.6	832.0	842.4	843.9
30°	797.9	802.3	811.2	823.1	824.6
32.5°	775.6	780.1	790.5	802.3	805.3
35°	747.5	753.4	765.3	780.1	783.1
37.5°	722.3	726.7	741.5	757.9	762.3
40°	691.1	700.0	714.8	734.1	741.5
42.5°	660.0	668.9	686.7	711.9	720.8
45°	627.3	637.7	660.0	688.1	700.0
47.5°	594.7	606.6	631.8	664.4	677.8
50°	557.6	572.5	603.6	640.7	655.5
52.5°	522.0	539.8	574.0	615.5	634.8
55°	485.0	502.8	547.3	590.3	611.0
57.5°	443.4	467.2	516.1	565.1	587.3
60°	404.9	427.1	486.4	539.8	562.1
62.5°	363.4	393.0	456.8	513.1	535.4
65°	320.3	353.0	425.6	482.0	504.2
67.5°	281.8	317.4	394.5	450.9	473.1
70°	235.8	280.3	360.4	416.7	439.0
72.5°	192.8	241.7	324.8	379.7	400.4
75°	151.3	206.1	287.7	336.7	347.0
77.5°	112.7	170.6	249.2	269.9	262.5
80°	80.1	136.4	194.3	183.9	188.4
82.5°	51.9	103.8	120.1	136.4	140.9
85°	29.7	60.8	74.2	80.1	83.1
87.5°	13.3	22.2	29.7	29.7	28.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)