

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: P309558

Luminaire Tested: **24FCZ2-50-UNV-L82765-HRP-CA125-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: P309558
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-50-UNV-L82765-HRP-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC 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: 3511.0 lumens
Efficiency: N/A
Efficacy: 80.7 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

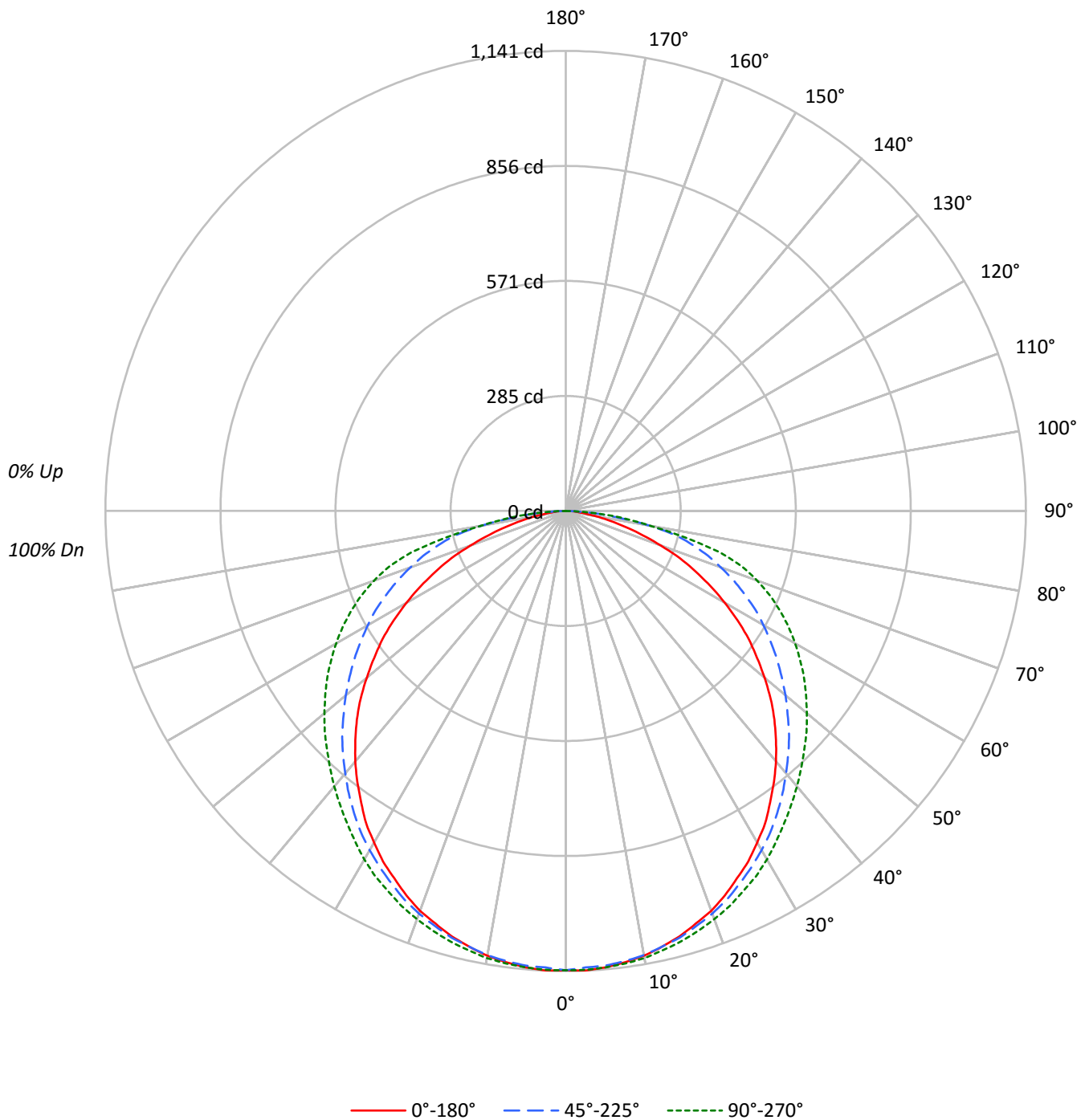
Input Watts (W): 43.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1533	1533	1533
5°	1535	1529	1535
10°	1530	1528	1538
15°	1521	1525	1540
20°	1511	1522	1543
25°	1493	1514	1545
30°	1475	1510	1551
35°	1451	1502	1552
40°	1425	1492	1567
45°	1393	1491	1592
50°	1348	1489	1634
55°	1300	1500	1693
60°	1226	1523	1768
65°	1132	1558	1867
70°	989	1613	1989
75°	802	1696	2056
80°	592	1663	1663
85°	454	1226	1385



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.9	3.1
10°-20°	309.9	8.8
20°-30°	471.8	13.4
30°-40°	572.8	16.3
40°-50°	605.2	17.2
50°-60°	571.1	16.3
60°-70°	474.8	13.5
70°-80°	312.4	8.9
80°-90°	85.1	2.4
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°	889.6	25.3
0°-40°	1462.4	41.7
0°-60°	2638.6	75.2
0°-90°	3511.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3511.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1139	1139	1139	1139	1139	
5°	1136	1136	1132	1136	1136	108
15°	1092	1094	1095	1105	1105	308
25°	1005	1011	1020	1038	1041	464
35°	883	894	914	938	945	553
45°	732	747	783	822	836	564
55°	554	578	639	700	722	494
65°	356	397	490	562	586	352
75°	154	225	326	387	395	166
85°	29	65	79	88	90	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1139.1	1139.1	1139.1	1139.1	1139.1
2.5°	1140.6	1139.1	1133.3	1139.1	1139.1
5°	1136.2	1136.2	1131.8	1136.2	1136.2
7.5°	1128.9	1128.9	1125.9	1131.8	1131.8
10°	1120.0	1120.0	1118.6	1125.9	1125.9
12.5°	1106.8	1108.3	1106.8	1115.6	1115.6
15°	1092.1	1093.6	1095.1	1105.3	1105.3
17.5°	1073.0	1075.9	1078.9	1090.6	1092.1
20°	1055.4	1056.8	1062.7	1075.9	1077.4
22.5°	1031.8	1036.3	1043.6	1056.8	1061.2
25°	1005.4	1011.3	1020.1	1037.7	1040.7
27.5°	980.4	984.8	996.6	1015.7	1021.6
30°	949.5	956.9	971.6	990.7	998.0
32.5°	920.1	927.5	945.1	965.7	971.6
35°	883.4	893.7	914.3	937.8	945.1
37.5°	848.1	858.4	883.4	909.8	918.7
40°	811.4	823.1	849.6	880.5	892.2
42.5°	771.7	787.8	817.2	851.1	864.3
45°	732.0	746.7	783.4	821.7	836.4
47.5°	689.4	707.0	746.7	792.3	809.9
50°	643.8	665.8	711.4	761.4	780.5
52.5°	598.2	623.2	674.7	730.5	751.1
55°	554.1	577.7	639.4	699.7	721.7
57.5°	505.6	535.0	602.6	667.3	689.4
60°	455.7	488.0	565.9	633.5	657.0
62.5°	405.7	442.4	530.6	598.2	623.2
65°	355.7	396.9	489.5	561.5	586.5
67.5°	307.2	352.8	451.2	523.3	548.3
70°	251.3	308.7	410.1	480.6	505.6
72.5°	199.9	266.0	370.4	436.6	458.6
75°	154.3	224.9	326.3	386.6	395.4
77.5°	113.2	183.7	280.7	301.3	302.8
80°	76.4	147.0	214.6	211.7	214.6
82.5°	50.0	110.2	135.2	151.4	152.9
85°	29.4	64.7	79.4	88.2	89.7
87.5°	14.7	22.0	27.9	29.4	32.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)