

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: P309570

Luminaire Tested: **24FCZ2-50-UNV-L82765-HRP-CP125-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: P309570
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-CP125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125"
POLYCARB SHEET
Light Source: (168) 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: 3534.0 lumens
Efficiency: N/A
Efficacy: 80.5 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

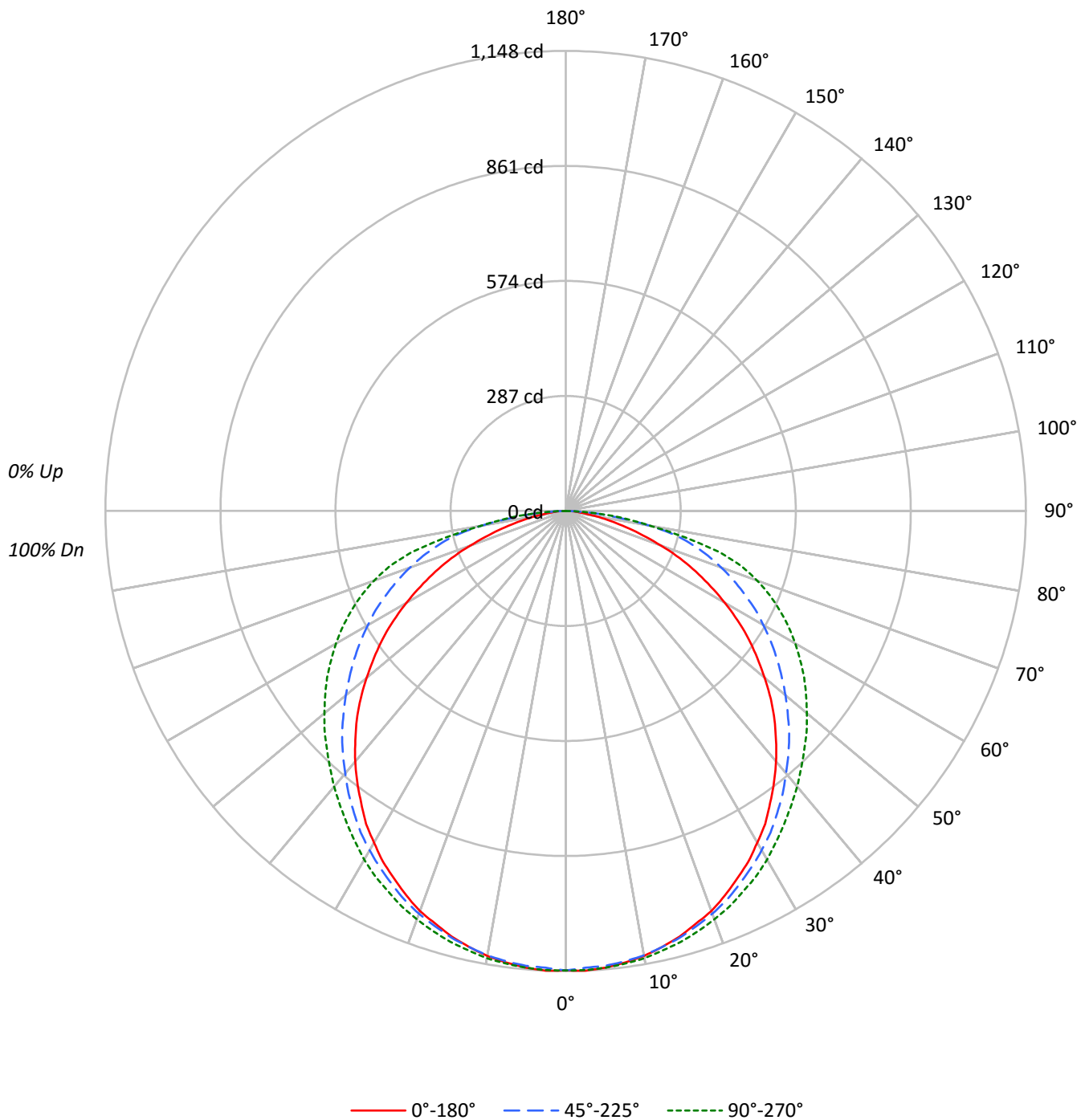
Input Watts (W): 43.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1543	1543	1543
5°	1545	1539	1545
10°	1540	1538	1548
15°	1531	1535	1550
20°	1521	1532	1553
25°	1502	1524	1555
30°	1485	1519	1561
35°	1461	1511	1563
40°	1434	1502	1577
45°	1402	1501	1602
50°	1356	1499	1644
55°	1308	1510	1704
60°	1234	1533	1780
65°	1140	1569	1879
70°	995	1624	2002
75°	807	1707	2069
80°	596	1674	1674
85°	457	1233	1392



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.6	3.1
10°-20°	311.9	8.8
20°-30°	474.9	13.4
30°-40°	576.6	16.3
40°-50°	609.2	17.2
50°-60°	574.8	16.3
60°-70°	477.9	13.5
70°-80°	314.4	8.9
80°-90°	85.7	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°	895.4	25.3
0°-40°	1472.0	41.7
0°-60°	2655.9	75.2
0°-90°	3534.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3534.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1147	1147	1147	1147	1147	
5°	1144	1144	1139	1144	1144	109
15°	1099	1101	1102	1113	1113	310
25°	1012	1018	1027	1044	1048	467
35°	889	900	920	944	951	557
45°	737	752	789	827	842	567
55°	558	581	644	704	726	497
65°	358	400	493	565	590	354
75°	155	226	328	389	398	167
85°	30	65	80	89	90	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1146.6	1146.6	1146.6	1146.6	1146.6
2.5°	1148.1	1146.6	1140.7	1146.6	1146.6
5°	1143.7	1143.7	1139.2	1143.7	1143.7
7.5°	1136.3	1136.3	1133.3	1139.2	1139.2
10°	1127.4	1127.4	1125.9	1133.3	1133.3
12.5°	1114.1	1115.5	1114.1	1122.9	1122.9
15°	1099.3	1100.7	1102.2	1112.6	1112.6
17.5°	1080.0	1083.0	1085.9	1097.8	1099.3
20°	1062.3	1063.8	1069.7	1083.0	1084.5
22.5°	1038.6	1043.0	1050.4	1063.8	1068.2
25°	1012.0	1017.9	1026.8	1044.5	1047.5
27.5°	986.8	991.3	1003.1	1022.3	1028.2
30°	955.8	963.2	977.9	997.2	1004.6
32.5°	926.2	933.6	951.3	972.0	977.9
35°	889.2	899.5	920.2	943.9	951.3
37.5°	853.7	864.0	889.2	915.8	924.7
40°	816.7	828.5	855.1	886.2	898.1
42.5°	776.7	793.0	822.6	856.6	869.9
45°	736.8	751.6	788.6	827.0	841.8
47.5°	693.9	711.6	751.6	797.4	815.2
50°	648.0	670.2	716.1	766.4	785.6
52.5°	602.2	627.3	679.1	735.3	756.0
55°	557.8	581.4	643.6	704.2	726.4
57.5°	508.9	538.5	606.6	671.7	693.9
60°	458.6	491.2	569.6	637.7	661.3
62.5°	408.3	445.3	534.1	602.2	627.3
65°	358.0	399.5	492.7	565.2	590.3
67.5°	309.2	355.1	454.2	526.7	551.9
70°	253.0	310.7	412.8	483.8	508.9
72.5°	201.2	267.8	372.8	439.4	461.6
75°	155.3	226.4	328.4	389.1	398.0
77.5°	113.9	184.9	282.6	303.3	304.8
80°	76.9	147.9	216.0	213.0	216.0
82.5°	50.3	111.0	136.1	152.4	153.9
85°	29.6	65.1	79.9	88.8	90.2
87.5°	14.8	22.2	28.1	29.6	32.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)