

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: P309522

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-HRP-CP125-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: P309522
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: 24FCZ2-50HE-UNV-L82765-HRP-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB SHEET
Light Source: (336) 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: 3460.0 lumens
Efficiency: N/A
Efficacy: 88.5 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

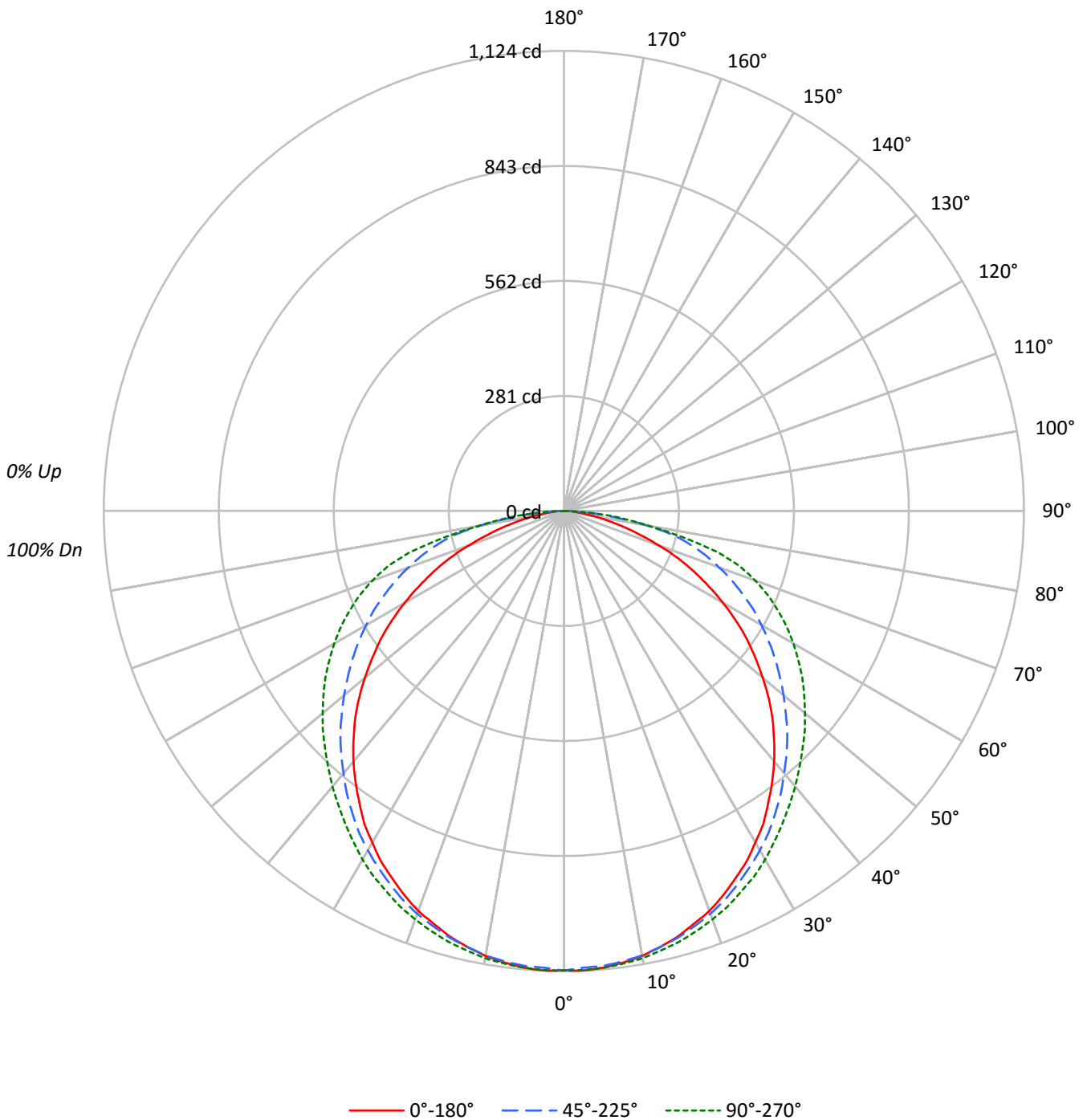
Input Watts (W): 39.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	101	96	93	96	93	90	92	90	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	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	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	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1510	1510	1510
5°	1512	1506	1512
10°	1508	1506	1516
15°	1499	1503	1517
20°	1489	1500	1520
25°	1471	1492	1522
30°	1454	1488	1528
35°	1430	1480	1530
40°	1404	1470	1544
45°	1373	1469	1568
50°	1328	1468	1610
55°	1281	1478	1668
60°	1208	1501	1742
65°	1116	1536	1840
70°	974	1590	1960
75°	791	1672	2026
80°	583	1639	1639
85°	448	1207	1365



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.3	3.1
10°-20°	305.4	8.8
20°-30°	464.9	13.4
30°-40°	564.5	16.3
40°-50°	596.4	17.2
50°-60°	562.8	16.3
60°-70°	467.9	13.5
70°-80°	307.9	8.9
80°-90°	83.9	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°	876.6	25.3
0°-40°	1441.2	41.7
0°-60°	2600.3	75.2
0°-90°	3460.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3460.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1123	1123	1123	1123	1123	
5°	1120	1120	1115	1120	1120	106
15°	1076	1078	1079	1089	1089	304
25°	991	997	1005	1023	1026	457
35°	871	881	901	924	931	545
45°	721	736	772	810	824	556
55°	546	569	630	690	711	486
65°	350	391	482	553	578	346
75°	152	222	322	381	390	164
85°	29	64	78	87	88	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1122.6	1122.6	1122.6	1122.6	1122.6
2.5°	1124.0	1122.6	1116.8	1122.6	1122.6
5°	1119.7	1119.7	1115.4	1119.7	1119.7
7.5°	1112.5	1112.5	1109.6	1115.4	1115.4
10°	1103.8	1103.8	1102.3	1109.6	1109.6
12.5°	1090.7	1092.2	1090.7	1099.4	1099.4
15°	1076.2	1077.7	1079.1	1089.3	1089.3
17.5°	1057.4	1060.3	1063.2	1074.8	1076.2
20°	1040.0	1041.5	1047.3	1060.3	1061.8
22.5°	1016.9	1021.2	1028.4	1041.5	1045.8
25°	990.8	996.6	1005.3	1022.7	1025.5
27.5°	966.2	970.5	982.1	1000.9	1006.7
30°	935.7	943.0	957.5	976.3	983.5
32.5°	906.8	914.0	931.4	951.7	957.5
35°	870.6	880.7	901.0	924.2	931.4
37.5°	835.8	845.9	870.6	896.6	905.3
40°	799.6	811.2	837.2	867.7	879.2
42.5°	760.5	776.4	805.4	838.7	851.7
45°	721.4	735.8	772.1	809.7	824.2
47.5°	679.4	696.7	735.8	780.7	798.1
50°	634.4	656.2	701.1	750.3	769.2
52.5°	589.5	614.2	664.9	719.9	740.2
55°	546.1	569.3	630.1	689.5	711.2
57.5°	498.3	527.3	593.9	657.6	679.4
60°	449.0	480.9	557.7	624.3	647.5
62.5°	399.8	436.0	522.9	589.5	614.2
65°	350.5	391.1	482.4	553.3	578.0
67.5°	302.7	347.6	444.7	515.7	540.3
70°	247.7	304.2	404.1	473.7	498.3
72.5°	197.0	262.2	365.0	430.2	451.9
75°	152.1	221.6	321.6	381.0	389.7
77.5°	111.5	181.1	276.7	296.9	298.4
80°	75.3	144.9	211.5	208.6	211.5
82.5°	49.2	108.6	133.3	149.2	150.6
85°	29.0	63.7	78.2	86.9	88.4
87.5°	14.5	21.7	27.5	29.0	31.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)