

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: P309567

Luminaire Tested: **24FCZ2-50-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: P309567
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-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125"
POLYCARB 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: 3443.0 lumens
Efficiency: N/A
Efficacy: 79.1 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

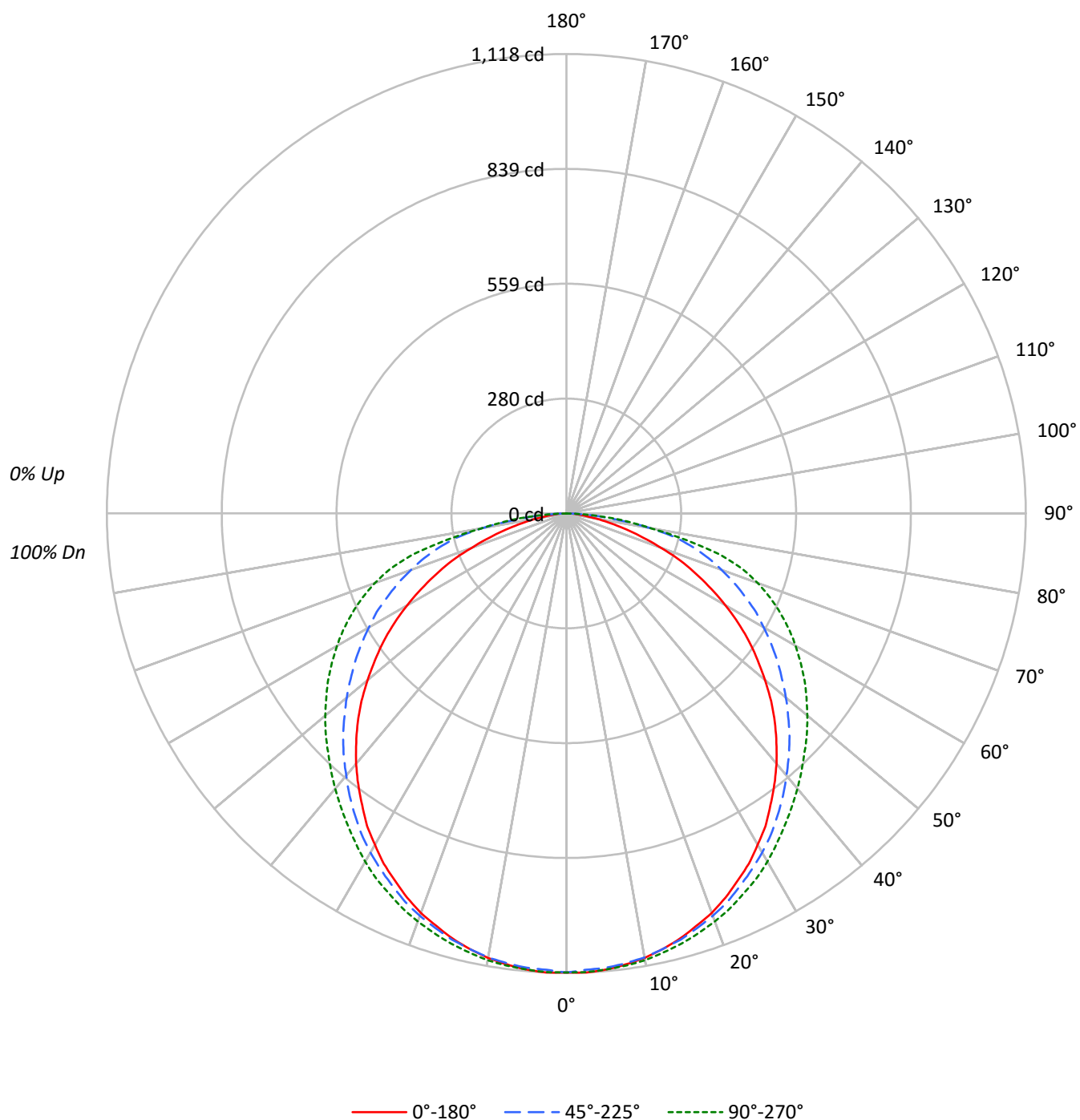
Input Watts (W): 43.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1503	1503	1503
5°	1505	1499	1505
10°	1501	1499	1508
15°	1492	1496	1510
20°	1482	1492	1513
25°	1464	1485	1515
30°	1447	1480	1521
35°	1423	1473	1522
40°	1398	1463	1537
45°	1366	1462	1561
50°	1321	1460	1602
55°	1275	1471	1660
60°	1202	1493	1734
65°	1110	1528	1831
70°	970	1582	1950
75°	787	1664	2015
80°	581	1630	1630
85°	445	1201	1357



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.8	3.1
10°-20°	303.9	8.8
20°-30°	462.6	13.4
30°-40°	561.7	16.3
40°-50°	593.5	17.2
50°-60°	560.0	16.3
60°-70°	465.6	13.5
70°-80°	306.3	8.9
80°-90°	83.5	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°	872.3	25.3
0°-40°	1434.1	41.7
0°-60°	2587.5	75.2
0°-90°	3443.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3443.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1117	1117	1117	1117	1117	
5°	1114	1114	1110	1114	1114	106
15°	1071	1072	1074	1084	1084	302
25°	986	992	1000	1018	1020	455
35°	866	876	897	920	927	542
45°	718	732	768	806	820	553
55°	543	566	627	686	708	484
65°	349	389	480	551	575	345
75°	151	220	320	379	388	163
85°	29	63	78	86	88	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1117.1	1117.1	1117.1	1117.1	1117.1
2.5°	1118.5	1117.1	1111.3	1117.1	1117.1
5°	1114.2	1114.2	1109.9	1114.2	1114.2
7.5°	1107.0	1107.0	1104.1	1109.9	1109.9
10°	1098.3	1098.3	1096.9	1104.1	1104.1
12.5°	1085.4	1086.8	1085.4	1094.0	1094.0
15°	1071.0	1072.4	1073.8	1083.9	1083.9
17.5°	1052.2	1055.1	1058.0	1069.5	1071.0
20°	1034.9	1036.4	1042.1	1055.1	1056.5
22.5°	1011.9	1016.2	1023.4	1036.4	1040.7
25°	985.9	991.7	1000.3	1017.6	1020.5
27.5°	961.4	965.7	977.3	996.0	1001.8
30°	931.1	938.4	952.8	971.5	978.7
32.5°	902.3	909.5	926.8	947.0	952.8
35°	866.3	876.4	896.6	919.6	926.8
37.5°	831.7	841.8	866.3	892.2	900.9
40°	795.7	807.2	833.1	863.4	874.9
42.5°	756.7	772.6	801.4	834.6	847.5
45°	717.8	732.2	768.3	805.7	820.2
47.5°	676.0	693.3	732.2	776.9	794.2
50°	631.3	653.0	697.6	746.6	765.4
52.5°	586.6	611.2	661.6	716.4	736.6
55°	543.4	566.5	627.0	686.1	707.7
57.5°	495.8	524.7	591.0	654.4	676.0
60°	446.8	478.5	554.9	621.2	644.3
62.5°	397.8	433.9	520.3	586.6	611.2
65°	348.8	389.2	480.0	550.6	575.1
67.5°	301.3	345.9	442.5	513.1	537.6
70°	246.5	302.7	402.2	471.3	495.8
72.5°	196.0	260.9	363.2	428.1	449.7
75°	151.3	220.5	320.0	379.1	387.7
77.5°	111.0	180.2	275.3	295.5	296.9
80°	75.0	144.1	210.4	207.6	210.4
82.5°	49.0	108.1	132.6	148.5	149.9
85°	28.8	63.4	77.8	86.5	87.9
87.5°	14.4	21.6	27.4	28.8	31.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)