

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: P309515

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-HRP-CA125-W2A-U-5500K**

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: P309515
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-CA125-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 5500K 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: 3612.0 lumens
Efficiency: N/A
Efficacy: 91.4 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

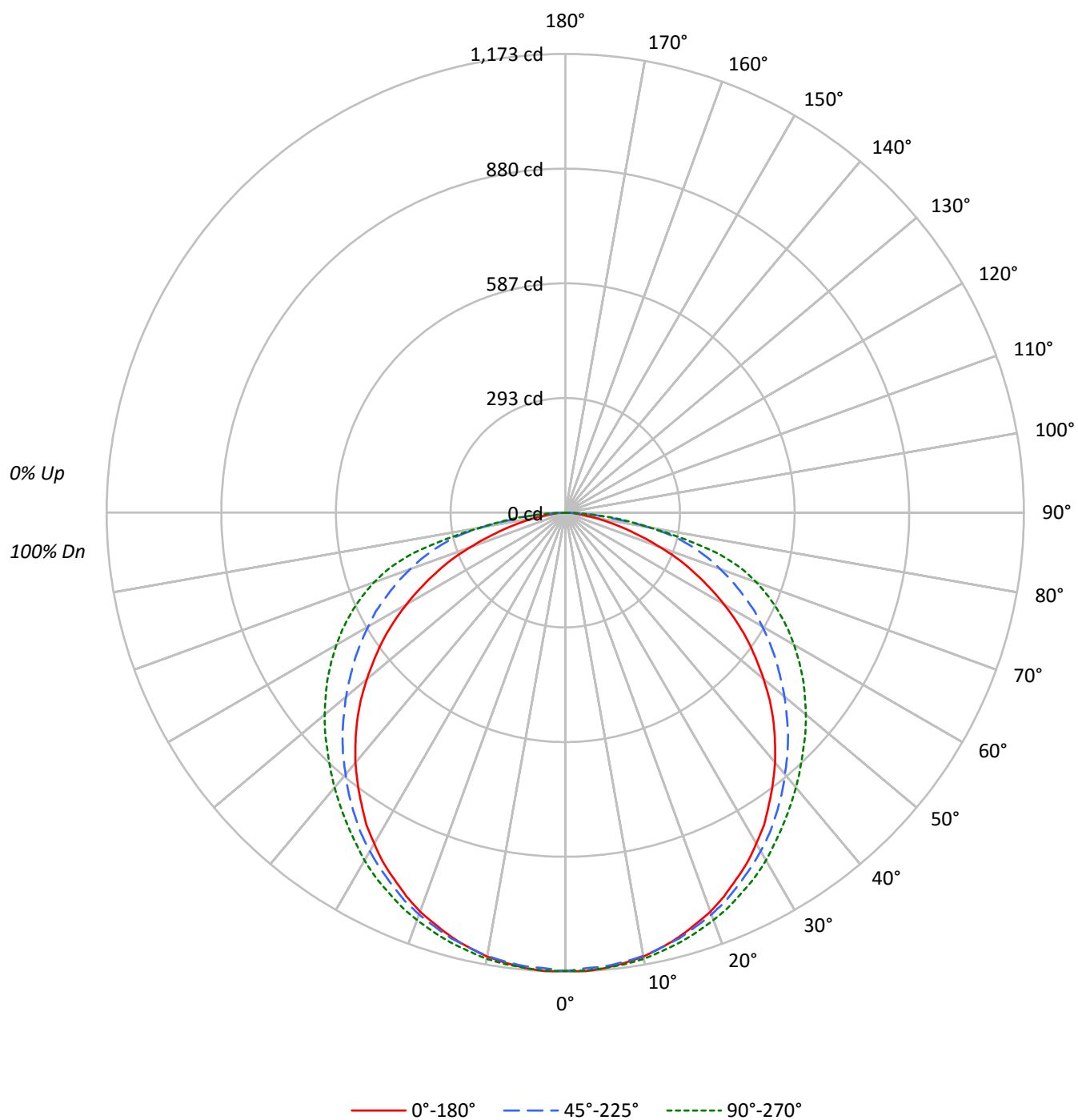
Input Watts (W): 39.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1577	1577	1577
5°	1579	1573	1579
10°	1574	1572	1583
15°	1565	1569	1584
20°	1555	1565	1587
25°	1536	1558	1589
30°	1518	1553	1595
35°	1493	1545	1597
40°	1466	1535	1612
45°	1433	1534	1637
50°	1386	1532	1681
55°	1337	1543	1742
60°	1262	1567	1819
65°	1165	1603	1921
70°	1017	1660	2046
75°	826	1745	2115
80°	609	1711	1711
85°	466	1261	1423



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.0	3.1
10°-20°	318.8	8.8
20°-30°	485.3	13.4
30°-40°	589.3	16.3
40°-50°	622.6	17.2
50°-60°	587.5	16.3
60°-70°	488.5	13.5
70°-80°	321.4	8.9
80°-90°	87.6	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°	915.1	25.3
0°-40°	1504.5	41.7
0°-60°	2714.6	75.2
0°-90°	3612.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3612.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1172	1172	1172	1172	1172	
5°	1169	1169	1164	1169	1169	111
15°	1124	1125	1127	1137	1137	317
25°	1034	1040	1049	1068	1071	477
35°	909	919	941	965	972	569
45°	753	768	806	845	860	580
55°	570	594	658	720	742	508
65°	366	408	504	578	603	362
75°	159	231	336	398	407	171
85°	30	66	82	91	92	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1171.9	1171.9	1171.9	1171.9	1171.9
2.5°	1173.4	1171.9	1165.9	1171.9	1171.9
5°	1168.9	1168.9	1164.4	1168.9	1168.9
7.5°	1161.3	1161.3	1158.3	1164.4	1164.4
10°	1152.3	1152.3	1150.7	1158.3	1158.3
12.5°	1138.6	1140.2	1138.6	1147.7	1147.7
15°	1123.5	1125.0	1126.6	1137.1	1137.1
17.5°	1103.9	1106.9	1109.9	1122.0	1123.5
20°	1085.7	1087.2	1093.3	1106.9	1108.4
22.5°	1061.5	1066.1	1073.6	1087.2	1091.8
25°	1034.3	1040.4	1049.4	1067.6	1070.6
27.5°	1008.6	1013.1	1025.2	1044.9	1050.9
30°	976.8	984.4	999.5	1019.2	1026.7
32.5°	946.6	954.2	972.3	993.5	999.5
35°	908.8	919.4	940.6	964.8	972.3
37.5°	872.5	883.1	908.8	936.0	945.1
40°	834.7	846.8	874.0	905.8	917.9
42.5°	793.9	810.5	840.8	875.5	889.1
45°	753.1	768.2	806.0	845.3	860.4
47.5°	709.2	727.3	768.2	815.0	833.2
50°	662.3	685.0	731.9	783.3	803.0
52.5°	615.4	641.2	694.1	751.5	772.7
55°	570.1	594.3	657.8	719.8	742.5
57.5°	520.2	550.4	620.0	686.5	709.2
60°	468.8	502.0	582.2	651.7	675.9
62.5°	417.4	455.2	545.9	615.4	641.2
65°	365.9	408.3	503.5	577.6	603.3
67.5°	316.0	362.9	464.2	538.3	564.0
70°	258.6	317.6	421.9	494.5	520.2
72.5°	205.7	273.7	381.1	449.1	471.8
75°	158.8	231.4	335.7	397.7	406.8
77.5°	116.4	189.0	288.8	310.0	311.5
80°	78.6	151.2	220.8	217.7	220.8
82.5°	51.4	113.4	139.1	155.8	157.3
85°	30.2	66.5	81.7	90.7	92.2
87.5°	15.1	22.7	28.7	30.2	33.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)