

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: P313272

Luminaire Tested: **24FCZ2-50-UNV-L83050-HRP-CA125-W2A-U-4000K**

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: P313272
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-L83050-HRP-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 4000K 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: 3717.0 lumens
Efficiency: N/A
Efficacy: 85.1 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

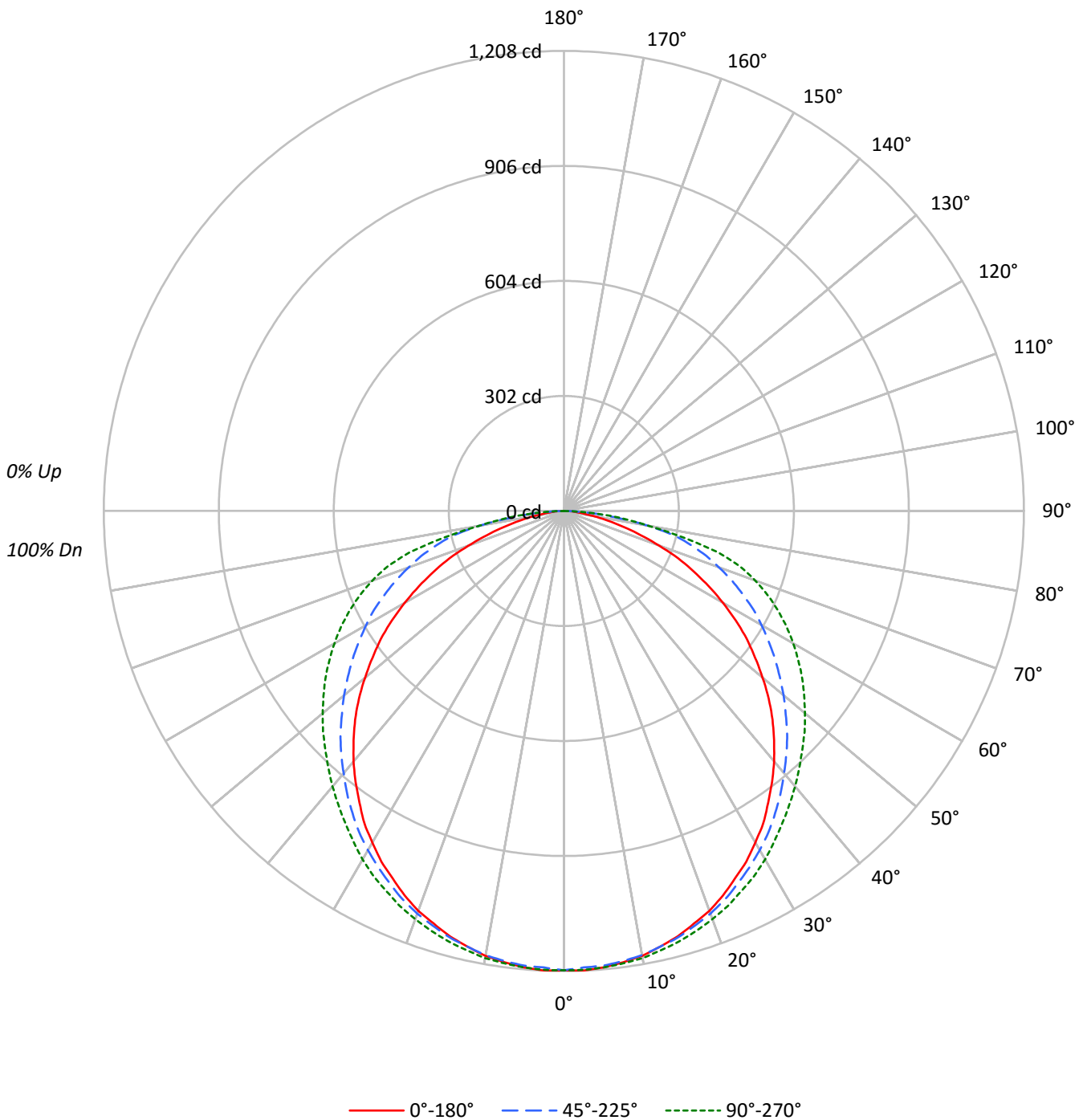
Input Watts (W): 43.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1623	1623	1623
5°	1625	1618	1625
10°	1620	1618	1629
15°	1611	1615	1630
20°	1600	1611	1633
25°	1580	1603	1636
30°	1562	1598	1642
35°	1536	1590	1644
40°	1509	1580	1659
45°	1474	1578	1685
50°	1427	1577	1730
55°	1376	1588	1792
60°	1298	1612	1872
65°	1199	1650	1977
70°	1047	1708	2106
75°	849	1796	2176
80°	627	1760	1760
85°	480	1297	1465



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.2	3.1
10°-20°	328.1	8.8
20°-30°	499.4	13.4
30°-40°	606.4	16.3
40°-50°	640.7	17.2
50°-60°	604.6	16.3
60°-70°	502.7	13.5
70°-80°	330.7	8.9
80°-90°	90.1	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°	941.8	25.3
0°-40°	1548.2	41.7
0°-60°	2793.5	75.2
0°-90°	3717.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3717.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1206	1206	1206	1206	1206	
5°	1203	1203	1198	1203	1203	114
15°	1156	1158	1159	1170	1170	326
25°	1064	1071	1080	1099	1102	491
35°	935	946	968	993	1001	585
45°	775	790	829	870	885	597
55°	587	612	677	741	764	523
65°	377	420	518	594	621	372
75°	163	238	346	409	419	176
85°	31	68	84	93	95	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1206.0	1206.0	1206.0	1206.0	1206.0
2.5°	1207.5	1206.0	1199.8	1206.0	1206.0
5°	1202.9	1202.9	1198.2	1202.9	1202.9
7.5°	1195.1	1195.1	1192.0	1198.2	1198.2
10°	1185.8	1185.8	1184.2	1192.0	1192.0
12.5°	1171.7	1173.3	1171.7	1181.1	1181.1
15°	1156.2	1157.7	1159.3	1170.2	1170.2
17.5°	1136.0	1139.1	1142.2	1154.6	1156.2
20°	1117.3	1118.8	1125.1	1139.1	1140.6
22.5°	1092.4	1097.1	1104.8	1118.8	1123.5
25°	1064.4	1070.6	1079.9	1098.6	1101.7
27.5°	1037.9	1042.6	1055.0	1075.3	1081.5
30°	1005.2	1013.0	1028.6	1048.8	1056.6
32.5°	974.1	981.9	1000.6	1022.4	1028.6
35°	935.2	946.1	967.9	992.8	1000.6
37.5°	897.9	908.8	935.2	963.2	972.6
40°	859.0	871.4	899.4	932.1	944.6
42.5°	817.0	834.1	865.2	901.0	915.0
45°	774.9	790.5	829.4	869.9	885.4
47.5°	729.8	748.5	790.5	838.7	857.4
50°	681.6	704.9	753.2	806.1	826.3
52.5°	633.3	659.8	714.3	773.4	795.2
55°	586.7	611.6	676.9	740.7	764.0
57.5°	535.3	566.4	638.0	706.5	729.8
60°	482.4	516.6	599.1	670.7	695.6
62.5°	429.5	468.4	561.8	633.3	659.8
65°	376.6	420.1	518.2	594.4	620.9
67.5°	325.2	373.5	477.7	554.0	580.4
70°	266.1	326.8	434.2	508.8	535.3
72.5°	211.6	281.7	392.1	462.2	485.5
75°	163.4	238.1	345.5	409.3	418.6
77.5°	119.8	194.5	297.2	319.0	320.6
80°	80.9	155.6	227.2	224.1	227.2
82.5°	52.9	116.7	143.2	160.3	161.8
85°	31.1	68.5	84.0	93.4	94.9
87.5°	15.6	23.3	29.6	31.1	34.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)