

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: P309517

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-HRP-CA125-W2A-U-6500K**

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: P309517
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-6500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 6500K 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: 3631.0 lumens
Efficiency: N/A
Efficacy: 90.5 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

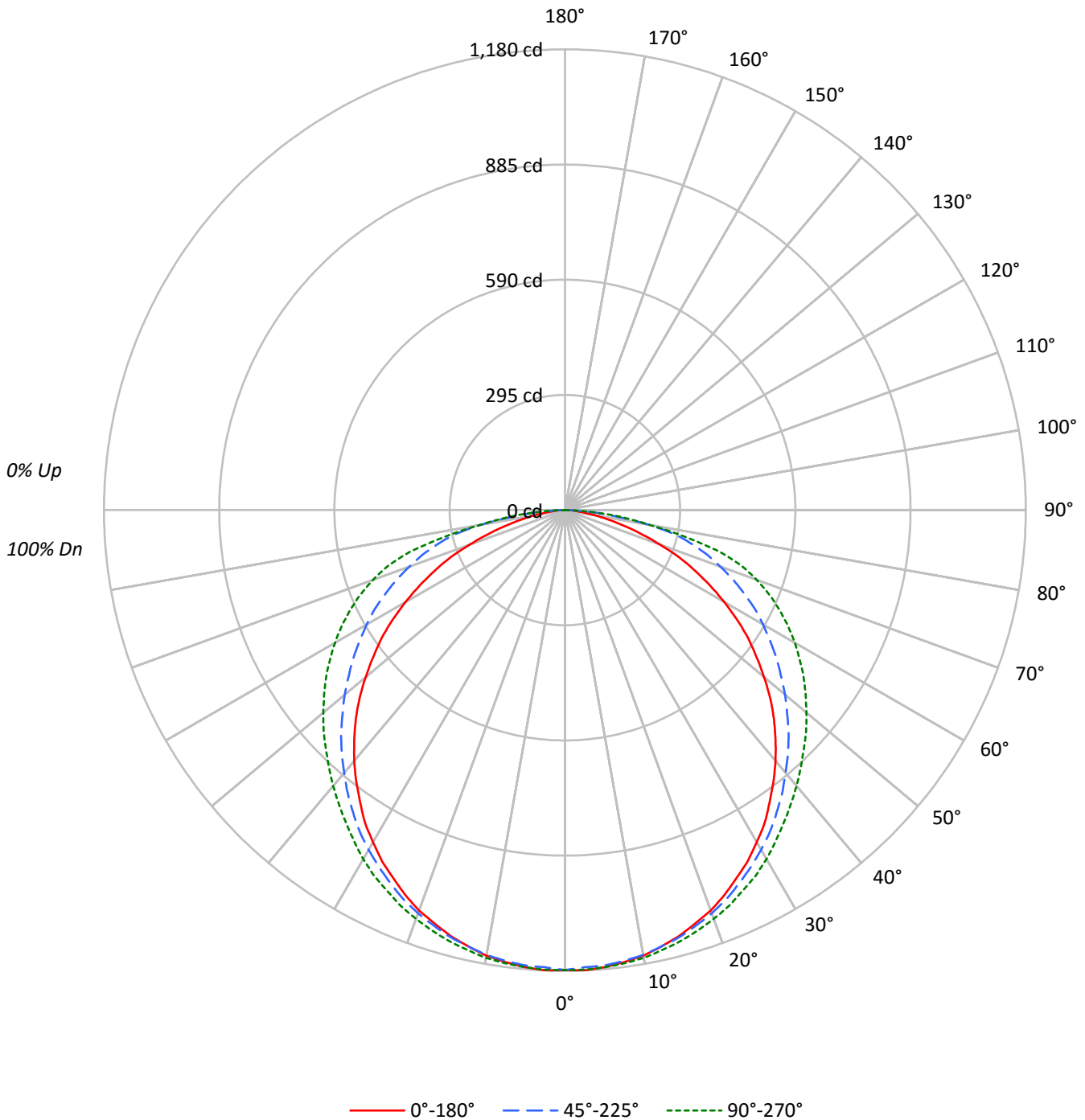
Input Watts (W): 40.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1585	1585	1585
5°	1587	1581	1587
10°	1583	1580	1591
15°	1573	1578	1592
20°	1563	1574	1595
25°	1544	1566	1598
30°	1526	1561	1604
35°	1501	1553	1605
40°	1474	1543	1621
45°	1440	1542	1646
50°	1394	1540	1690
55°	1344	1551	1751
60°	1268	1575	1829
65°	1171	1612	1931
70°	1022	1668	2057
75°	830	1755	2126
80°	612	1719	1719
85°	469	1267	1431



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.6	3.1
10°-20°	320.5	8.8
20°-30°	487.9	13.4
30°-40°	592.4	16.3
40°-50°	625.9	17.2
50°-60°	590.6	16.3
60°-70°	491.1	13.5
70°-80°	323.1	8.9
80°-90°	88.1	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°	920.0	25.3
0°-40°	1512.4	41.7
0°-60°	2728.8	75.2
0°-90°	3631.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3631.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1178	1178	1178	1178	1178	
5°	1175	1175	1170	1175	1175	112
15°	1129	1131	1132	1143	1143	319
25°	1040	1046	1055	1073	1076	480
35°	914	924	946	970	977	572
45°	757	772	810	850	865	583
55°	573	597	661	724	746	510
65°	368	410	506	581	606	364
75°	160	233	338	400	409	172
85°	30	67	82	91	93	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1178.1	1178.1	1178.1	1178.1	1178.1
2.5°	1179.6	1178.1	1172.0	1178.1	1178.1
5°	1175.0	1175.0	1170.5	1175.0	1175.0
7.5°	1167.4	1167.4	1164.4	1170.5	1170.5
10°	1158.3	1158.3	1156.8	1164.4	1164.4
12.5°	1144.6	1146.2	1144.6	1153.8	1153.8
15°	1129.4	1131.0	1132.5	1143.1	1143.1
17.5°	1109.7	1112.7	1115.8	1127.9	1129.4
20°	1091.4	1093.0	1099.0	1112.7	1114.2
22.5°	1067.1	1071.7	1079.3	1093.0	1097.5
25°	1039.8	1045.8	1055.0	1073.2	1076.2
27.5°	1013.9	1018.5	1030.6	1050.4	1056.5
30°	982.0	989.6	1004.8	1024.6	1032.2
32.5°	951.6	959.2	977.4	998.7	1004.8
35°	913.6	924.2	945.5	969.8	977.4
37.5°	877.1	887.7	913.6	940.9	950.1
40°	839.1	851.3	878.6	910.5	922.7
42.5°	798.1	814.8	845.2	880.1	893.8
45°	757.0	772.2	810.2	849.7	864.9
47.5°	712.9	731.2	772.2	819.3	837.6
50°	665.8	688.6	735.7	787.4	807.2
52.5°	618.7	644.5	697.7	755.5	776.8
55°	573.1	597.4	661.2	723.6	746.4
57.5°	522.9	553.3	623.2	690.1	712.9
60°	471.2	504.7	585.2	655.2	679.5
62.5°	419.5	457.6	548.8	618.7	644.5
65°	367.9	410.4	506.2	580.7	606.5
67.5°	317.7	364.8	466.7	541.2	567.0
70°	259.9	319.2	424.1	497.1	522.9
72.5°	206.7	275.1	383.1	451.5	474.3
75°	159.6	232.6	337.5	399.8	408.9
77.5°	117.0	190.0	290.3	311.6	313.1
80°	79.0	152.0	221.9	218.9	221.9
82.5°	51.7	114.0	139.8	156.6	158.1
85°	30.4	66.9	82.1	91.2	92.7
87.5°	15.2	22.8	28.9	30.4	33.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)