

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: P310689

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-CP125-W2A-U-3000K**

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: P310689
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-40HE-UNV-L82765-CP125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 3000K 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: 3435.0 lumens
Efficiency: N/A
Efficacy: 113.7 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

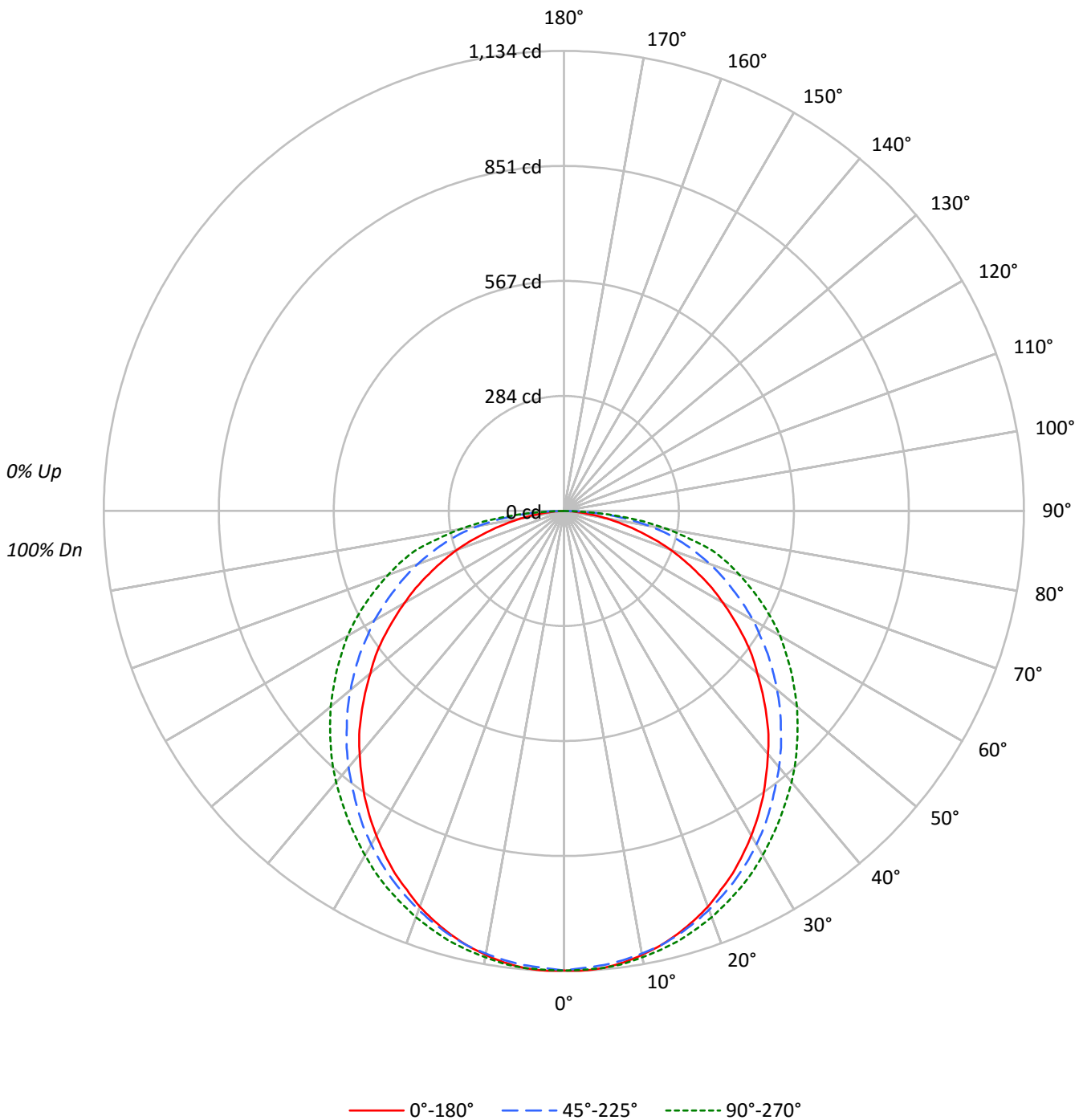
Input Watts (W): 30.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	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	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1524	1524	1524
5°	1527	1518	1527
10°	1518	1514	1526
15°	1505	1508	1527
20°	1487	1498	1526
25°	1464	1487	1524
30°	1436	1475	1523
35°	1408	1460	1524
40°	1375	1449	1533
45°	1342	1440	1546
50°	1303	1436	1570
55°	1270	1438	1601
60°	1221	1451	1656
65°	1165	1466	1716
70°	1103	1511	1811
75°	984	1576	1979
80°	839	1669	2022
85°	597	1653	1936



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.2	3.1
10°-20°	306.6	8.9
20°-30°	463.0	13.5
30°-40°	558.0	16.2
40°-50°	585.9	17.1
50°-60°	548.1	16.0
60°-70°	452.6	13.2
70°-80°	308.4	9.0
80°-90°	105.2	3.1
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°	876.8	25.5
0°-40°	1434.8	41.8
0°-60°	2568.8	74.8
0°-90°	3435.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3435.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1133	1133	1133	1133	1133	
5°	1131	1129	1124	1131	1131	107
15°	1080	1082	1083	1094	1096	305
25°	986	990	1002	1021	1027	454
35°	857	866	889	919	928	536
45°	706	720	757	798	813	544
55°	541	563	613	663	683	483
65°	366	397	460	519	539	363
75°	189	232	303	360	381	202
85°	39	76	107	121	125	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1132.8	1132.8	1132.8	1132.8	1132.8
2.5°	1134.0	1132.8	1127.1	1132.8	1131.7
5°	1130.6	1129.4	1123.7	1130.6	1130.6
7.5°	1122.6	1122.6	1116.9	1124.9	1126.0
10°	1111.2	1111.2	1107.8	1116.9	1116.9
12.5°	1097.5	1097.5	1097.5	1106.6	1107.8
15°	1080.4	1081.5	1082.7	1094.1	1096.4
17.5°	1059.9	1062.2	1065.6	1079.3	1081.5
20°	1038.2	1040.5	1046.2	1062.2	1065.6
22.5°	1010.9	1016.6	1024.6	1042.8	1046.2
25°	985.8	990.4	1001.8	1021.1	1026.8
27.5°	955.0	961.9	976.7	997.2	1005.2
30°	924.3	931.1	949.3	973.3	980.1
32.5°	891.2	901.5	920.9	945.9	953.9
35°	857.0	866.2	888.9	918.6	927.7
37.5°	819.4	832.0	857.0	888.9	900.3
40°	783.0	796.6	825.1	859.3	873.0
42.5°	746.5	760.2	792.1	830.8	844.5
45°	705.5	720.3	756.7	797.8	812.6
47.5°	664.4	682.7	722.6	765.9	781.8
50°	622.3	642.8	686.1	731.7	749.9
52.5°	584.7	604.0	649.6	698.6	715.7
55°	541.3	563.0	613.1	663.3	682.7
57.5°	496.9	520.8	574.4	629.1	648.5
60°	453.6	479.8	539.1	593.8	615.4
62.5°	411.4	437.6	499.2	556.2	577.8
65°	365.8	396.6	460.4	518.6	539.1
67.5°	322.5	355.6	422.8	479.8	500.3
70°	280.4	312.3	384.1	439.9	460.4
72.5°	234.8	271.2	343.0	401.2	422.8
75°	189.2	232.5	303.2	360.1	380.7
77.5°	147.0	191.5	262.1	308.9	319.1
80°	108.3	153.9	215.4	248.4	261.0
82.5°	69.5	115.1	164.1	188.0	198.3
85°	38.7	76.4	107.1	120.8	125.4
87.5°	16.0	33.1	43.3	49.0	49.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)