

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: P310688

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-CP125-W2A-U-2700K**

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: P310688
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-2700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 2700K 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: 3338.0 lumens
Efficiency: N/A
Efficacy: 109.8 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

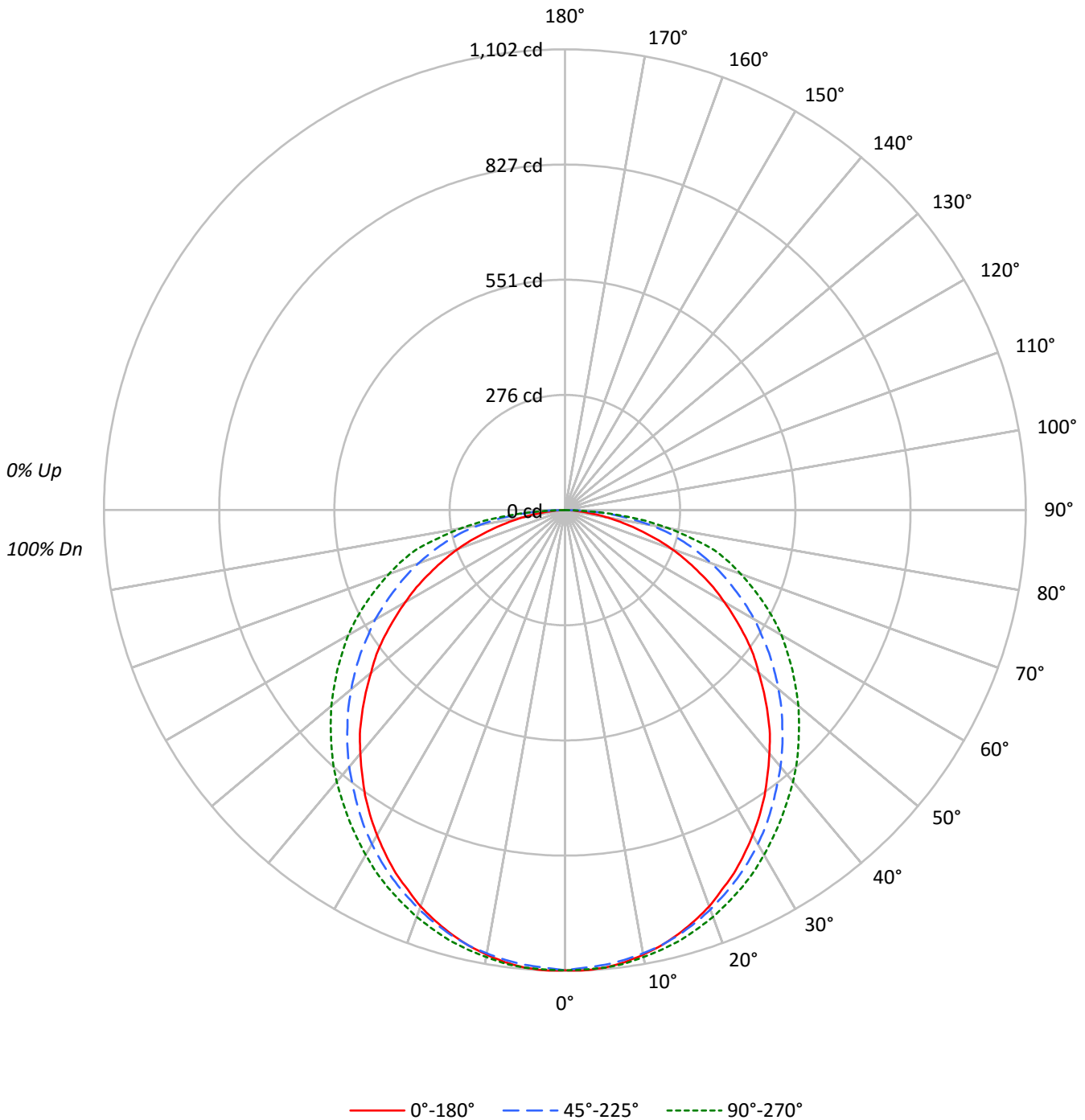
Input Watts (W): 30.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1481	1481	1481
5°	1484	1475	1484
10°	1475	1471	1483
15°	1462	1466	1484
20°	1445	1456	1483
25°	1422	1445	1481
30°	1395	1433	1480
35°	1368	1419	1481
40°	1336	1408	1490
45°	1304	1399	1502
50°	1266	1396	1525
55°	1234	1398	1556
60°	1186	1410	1609
65°	1132	1424	1668
70°	1072	1468	1760
75°	955	1531	1923
80°	815	1622	1965
85°	582	1607	1880



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.2	3.1
10°-20°	297.9	8.9
20°-30°	449.9	13.5
30°-40°	542.3	16.2
40°-50°	569.3	17.1
50°-60°	532.6	16.0
60°-70°	439.8	13.2
70°-80°	299.7	9.0
80°-90°	102.2	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°	852.0	25.5
0°-40°	1394.3	41.8
0°-60°	2496.2	74.8
0°-90°	3338.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3338.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1101	1101	1101	1101	1101	
5°	1099	1098	1092	1099	1099	104
15°	1050	1051	1052	1063	1065	296
25°	958	962	974	992	998	441
35°	833	842	864	893	902	520
45°	686	700	735	775	790	529
55°	526	547	596	645	663	470
65°	356	385	447	504	524	353
75°	184	226	295	350	370	196
85°	38	74	104	117	122	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1100.8	1100.8	1100.8	1100.8	1100.8
2.5°	1102.0	1100.8	1095.3	1100.8	1099.7
5°	1098.6	1097.5	1092.0	1098.6	1098.6
7.5°	1090.9	1090.9	1085.3	1093.1	1094.2
10°	1079.8	1079.8	1076.5	1085.3	1085.3
12.5°	1066.5	1066.5	1066.5	1075.4	1076.5
15°	1049.9	1051.0	1052.1	1063.2	1065.4
17.5°	1030.0	1032.2	1035.5	1048.8	1051.0
20°	1008.9	1011.1	1016.7	1032.2	1035.5
22.5°	982.3	987.9	995.6	1013.4	1016.7
25°	958.0	962.4	973.5	992.3	997.8
27.5°	928.1	934.7	949.1	969.1	976.8
30°	898.2	904.8	922.5	945.8	952.4
32.5°	866.1	876.0	894.9	919.2	927.0
35°	832.8	841.7	863.8	892.6	901.5
37.5°	796.3	808.5	832.8	863.8	874.9
40°	760.8	774.1	801.8	835.0	848.3
42.5°	725.4	738.7	769.7	807.4	820.6
45°	685.5	699.9	735.4	775.2	789.6
47.5°	645.7	663.4	702.1	744.2	759.7
50°	604.7	624.6	666.7	711.0	728.7
52.5°	568.1	587.0	631.3	678.9	695.5
55°	526.1	547.1	595.8	644.6	663.4
57.5°	482.9	506.1	558.2	611.3	630.2
60°	440.8	466.3	523.8	577.0	598.0
62.5°	399.8	425.3	485.1	540.5	561.5
65°	355.5	385.4	447.4	503.9	523.8
67.5°	313.4	345.5	410.9	466.3	486.2
70°	272.4	303.5	373.2	427.5	447.4
72.5°	228.1	263.6	333.4	389.8	410.9
75°	183.8	225.9	294.6	350.0	369.9
77.5°	142.9	186.1	254.7	300.1	310.1
80°	105.2	149.5	209.3	241.4	253.6
82.5°	67.6	111.9	159.5	182.7	192.7
85°	37.7	74.2	104.1	117.4	121.8
87.5°	15.5	32.1	42.1	47.6	47.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)