

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: P310759

Luminaire Tested: **24FCZ2-40-UNV-L82765-CP250-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: P310759
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: 24FCZ2-40-UNV-L82765-CP250-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (168) 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: 3590.0 lumens
Efficiency: N/A
Efficacy: 105.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

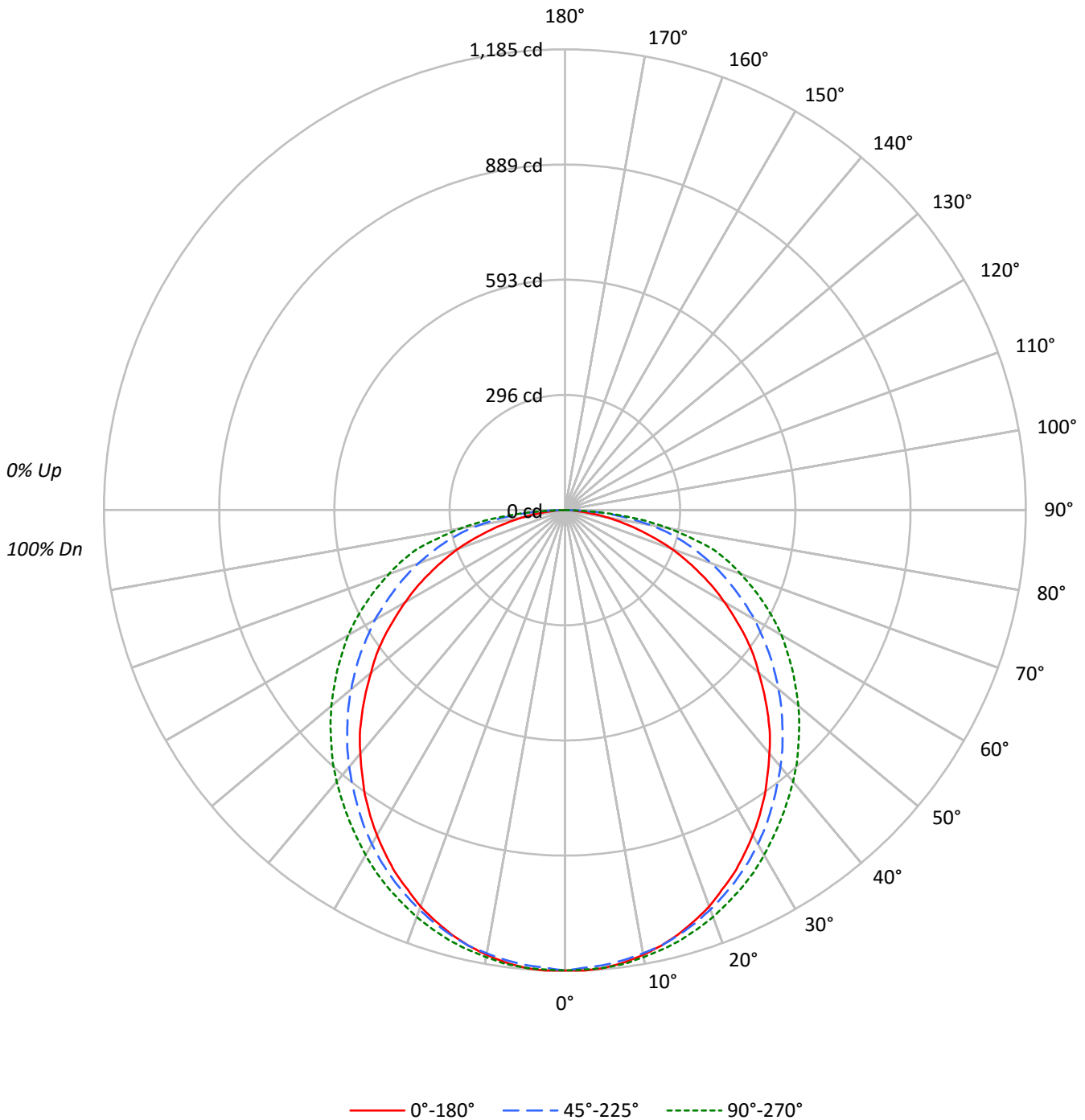
Input Watts (W): 34.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1593	1593	1593
5°	1596	1586	1596
10°	1587	1582	1595
15°	1573	1576	1596
20°	1554	1566	1595
25°	1530	1554	1593
30°	1501	1542	1591
35°	1471	1526	1593
40°	1437	1515	1603
45°	1403	1505	1616
50°	1361	1501	1640
55°	1327	1503	1674
60°	1276	1516	1731
65°	1217	1532	1794
70°	1153	1579	1893
75°	1028	1647	2068
80°	877	1744	2114
85°	625	1729	2022



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.0	3.1
10°-20°	320.4	8.9
20°-30°	483.9	13.5
30°-40°	583.2	16.2
40°-50°	612.3	17.1
50°-60°	572.8	16.0
60°-70°	473.1	13.2
70°-80°	322.4	9.0
80°-90°	109.9	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°	916.3	25.5
0°-40°	1499.6	41.8
0°-60°	2684.7	74.8
0°-90°	3590.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3590.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1184	1184	1184	1184	1184	
5°	1182	1180	1174	1182	1182	112
15°	1129	1130	1132	1144	1146	318
25°	1030	1035	1047	1067	1073	474
35°	896	905	929	960	970	560
45°	737	753	791	834	849	569
55°	566	588	641	693	714	505
65°	382	414	481	542	563	379
75°	198	243	317	376	398	211
85°	40	80	112	126	131	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1184.0	1184.0	1184.0	1184.0	1184.0
2.5°	1185.1	1184.0	1178.0	1184.0	1182.8
5°	1181.6	1180.4	1174.4	1181.6	1181.6
7.5°	1173.2	1173.2	1167.3	1175.6	1176.8
10°	1161.3	1161.3	1157.7	1167.3	1167.3
12.5°	1147.0	1147.0	1147.0	1156.6	1157.7
15°	1129.2	1130.4	1131.5	1143.5	1145.8
17.5°	1107.7	1110.1	1113.7	1128.0	1130.4
20°	1085.1	1087.5	1093.4	1110.1	1113.7
22.5°	1056.5	1062.5	1070.8	1089.9	1093.4
25°	1030.3	1035.1	1047.0	1067.2	1073.2
27.5°	998.1	1005.3	1020.8	1042.2	1050.5
30°	966.0	973.1	992.2	1017.2	1024.3
32.5°	931.4	942.2	962.4	988.6	996.9
35°	895.7	905.2	929.1	960.0	969.6
37.5°	856.4	869.5	895.7	929.1	941.0
40°	818.3	832.6	862.4	898.1	912.4
42.5°	780.2	794.5	827.8	868.3	882.6
45°	737.3	752.8	790.9	833.8	849.3
47.5°	694.4	713.5	755.2	800.4	817.1
50°	650.3	671.8	717.0	764.7	783.7
52.5°	611.0	631.3	678.9	730.1	748.0
55°	565.8	588.4	640.8	693.2	713.5
57.5°	519.3	544.3	600.3	657.5	677.7
60°	474.1	501.5	563.4	620.6	643.2
62.5°	430.0	457.4	521.7	581.3	603.9
65°	382.3	414.5	481.2	541.9	563.4
67.5°	337.1	371.6	441.9	501.5	522.9
70°	293.0	326.4	401.4	459.8	481.2
72.5°	245.4	283.5	358.5	419.3	441.9
75°	197.7	243.0	316.8	376.4	397.8
77.5°	153.7	200.1	274.0	322.8	333.5
80°	113.2	160.8	225.1	259.7	272.8
82.5°	72.7	120.3	171.5	196.5	207.3
85°	40.5	79.8	112.0	126.3	131.0
87.5°	16.7	34.5	45.3	51.2	51.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)