

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: P310721

Luminaire Tested: **24FCZ2-40-UNV-L82765-CA08-W2A-U-5500K**

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: P310721
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-CA08-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 5500K 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: 3848.0 lumens
Efficiency: N/A
Efficacy: 114.5 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

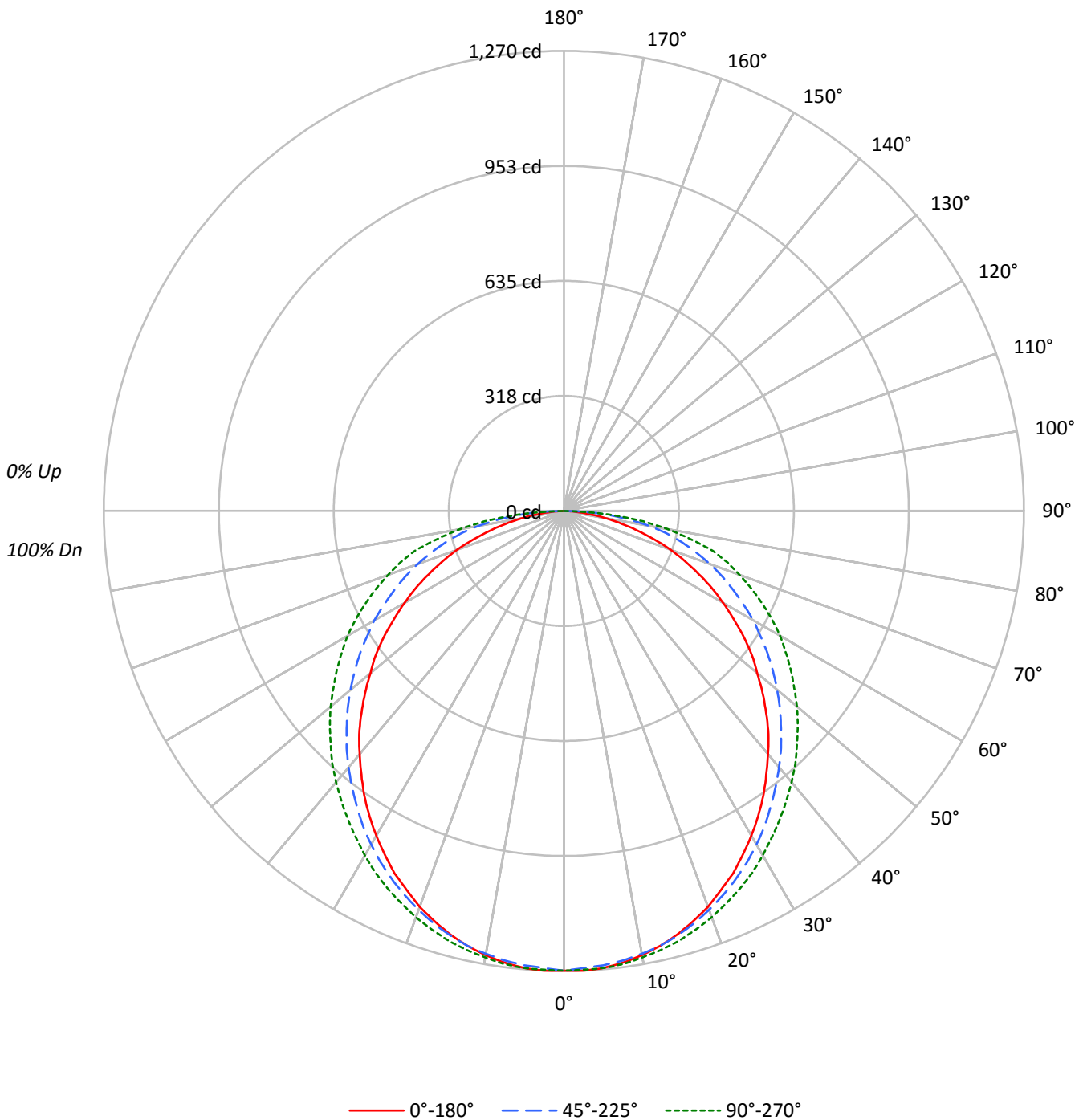
Input Watts (W): 33.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1707	1707	1707
5°	1711	1700	1711
10°	1701	1695	1709
15°	1686	1690	1711
20°	1665	1678	1709
25°	1639	1666	1708
30°	1609	1652	1706
35°	1577	1636	1707
40°	1541	1623	1718
45°	1504	1613	1732
50°	1459	1609	1759
55°	1422	1611	1794
60°	1367	1625	1855
65°	1305	1642	1923
70°	1236	1692	2029
75°	1102	1765	2217
80°	940	1870	2266
85°	670	1853	2167



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.1	3.1
10°-20°	343.4	8.9
20°-30°	518.7	13.5
30°-40°	625.1	16.2
40°-50°	656.3	17.1
50°-60°	614.0	16.0
60°-70°	507.1	13.2
70°-80°	345.5	9.0
80°-90°	117.8	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°	982.2	25.5
0°-40°	1607.3	41.8
0°-60°	2877.6	74.8
0°-90°	3848.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3848.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1269	1269	1269	1269	1269	
5°	1266	1265	1259	1266	1266	120
15°	1210	1212	1213	1226	1228	341
25°	1104	1109	1122	1144	1150	508
35°	960	970	996	1029	1039	600
45°	790	807	848	894	910	609
55°	606	631	687	743	765	541
65°	410	444	516	581	604	407
75°	212	260	340	403	426	226
85°	43	86	120	135	140	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1269.0	1269.0	1269.0	1269.0	1269.0
2.5°	1270.3	1269.0	1262.7	1269.0	1267.8
5°	1266.5	1265.2	1258.8	1266.5	1266.5
7.5°	1257.5	1257.5	1251.2	1260.1	1261.4
10°	1244.8	1244.8	1240.9	1251.2	1251.2
12.5°	1229.5	1229.5	1229.5	1239.7	1240.9
15°	1210.3	1211.6	1212.9	1225.6	1228.2
17.5°	1187.3	1189.9	1193.7	1209.0	1211.6
20°	1163.1	1165.6	1172.0	1189.9	1193.7
22.5°	1132.4	1138.8	1147.8	1168.2	1172.0
25°	1104.3	1109.4	1122.2	1143.9	1150.3
27.5°	1069.9	1077.5	1094.1	1117.1	1126.0
30°	1035.4	1043.1	1063.5	1090.3	1098.0
32.5°	998.4	1009.9	1031.6	1059.7	1068.6
35°	960.1	970.3	995.8	1029.0	1039.2
37.5°	917.9	932.0	960.1	995.8	1008.6
40°	877.1	892.4	924.3	962.6	977.9
42.5°	836.2	851.6	887.3	930.7	946.0
45°	790.3	806.9	847.7	893.7	910.3
47.5°	744.3	764.7	809.4	857.9	875.8
50°	697.1	720.1	768.6	819.6	840.1
52.5°	654.9	676.6	727.7	782.6	801.8
55°	606.4	630.7	686.9	743.0	764.7
57.5°	556.6	583.5	643.5	704.7	726.4
60°	508.1	537.5	603.9	665.2	689.4
62.5°	460.9	490.3	559.2	623.0	647.3
65°	409.8	444.3	515.8	580.9	603.9
67.5°	361.3	398.3	473.7	537.5	560.5
70°	314.1	349.8	430.2	492.8	515.8
72.5°	263.0	303.9	384.3	449.4	473.7
75°	211.9	260.4	339.6	403.4	426.4
77.5°	164.7	214.5	293.6	346.0	357.5
80°	121.3	172.4	241.3	278.3	292.4
82.5°	77.9	128.9	183.8	210.7	222.1
85°	43.4	85.5	120.0	135.3	140.4
87.5°	17.9	37.0	48.5	54.9	54.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)