

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: P310748

Luminaire Tested: **24FCZ2-40-UNV-L82765-CP187-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: P310748
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-CP187-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB 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: 3601.0 lumens
Efficiency: N/A
Efficacy: 107.2 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

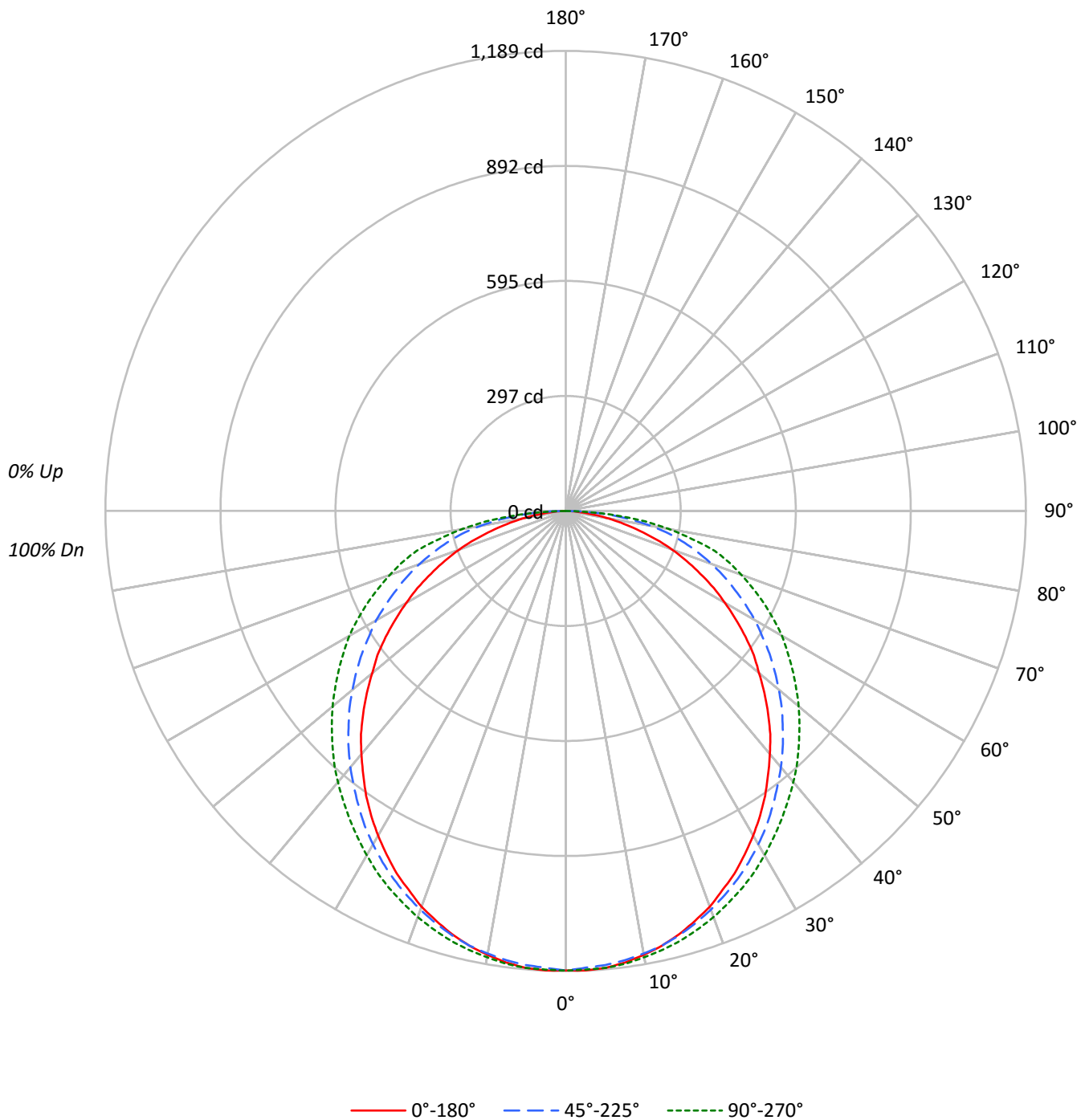
Input Watts (W): 33.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1598	1598	1598
5°	1601	1591	1601
10°	1592	1587	1600
15°	1578	1581	1601
20°	1558	1570	1600
25°	1534	1559	1598
30°	1505	1546	1596
35°	1476	1531	1597
40°	1442	1519	1607
45°	1407	1509	1621
50°	1365	1505	1645
55°	1331	1508	1679
60°	1280	1521	1736
65°	1221	1537	1799
70°	1156	1584	1899
75°	1031	1652	2074
80°	879	1750	2120
85°	627	1734	2029



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.4	3.1
10°-20°	321.4	8.9
20°-30°	485.4	13.5
30°-40°	585.0	16.2
40°-50°	614.2	17.1
50°-60°	574.6	16.0
60°-70°	474.5	13.2
70°-80°	323.3	9.0
80°-90°	110.3	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°	919.2	25.5
0°-40°	1504.2	41.8
0°-60°	2692.9	74.8
0°-90°	3601.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3601.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1188	1188	1188	1188	1188	
5°	1185	1184	1178	1185	1185	112
15°	1133	1134	1135	1147	1149	319
25°	1034	1038	1050	1070	1076	475
35°	898	908	932	963	972	561
45°	740	755	793	836	852	570
55°	568	590	643	695	716	507
65°	384	416	483	544	565	380
75°	198	244	318	378	399	211
85°	41	80	112	127	131	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1187.6	1187.6	1187.6	1187.6	1187.6
2.5°	1188.8	1187.6	1181.6	1187.6	1186.4
5°	1185.2	1184.0	1178.0	1185.2	1185.2
7.5°	1176.8	1176.8	1170.9	1179.2	1180.4
10°	1164.9	1164.9	1161.3	1170.9	1170.9
12.5°	1150.5	1150.5	1150.5	1160.1	1161.3
15°	1132.6	1133.8	1135.0	1147.0	1149.3
17.5°	1111.1	1113.5	1117.1	1131.4	1133.8
20°	1088.4	1090.8	1096.8	1113.5	1117.1
22.5°	1059.7	1065.7	1074.1	1093.2	1096.8
25°	1033.5	1038.2	1050.2	1070.5	1076.5
27.5°	1001.2	1008.4	1023.9	1045.4	1053.8
30°	968.9	976.1	995.2	1020.3	1027.5
32.5°	934.3	945.0	965.4	991.6	1000.0
35°	898.4	908.0	931.9	963.0	972.5
37.5°	859.0	872.2	898.4	931.9	943.9
40°	820.8	835.1	865.0	900.8	915.2
42.5°	782.6	796.9	830.3	871.0	885.3
45°	739.5	755.1	793.3	836.3	851.9
47.5°	696.5	715.7	757.5	802.9	819.6
50°	652.3	673.8	719.2	767.0	786.1
52.5°	612.9	633.2	681.0	732.4	750.3
55°	567.5	590.2	642.8	695.3	715.7
57.5°	520.9	546.0	602.2	659.5	679.8
60°	475.5	503.0	565.1	622.5	645.2
62.5°	431.3	458.8	523.3	583.0	605.7
65°	383.5	415.8	482.7	543.6	565.1
67.5°	338.1	372.8	443.3	503.0	524.5
70°	293.9	327.4	402.6	461.2	482.7
72.5°	246.1	284.3	359.6	420.6	443.3
75°	198.3	243.7	317.8	377.5	399.0
77.5°	154.1	200.7	274.8	323.8	334.5
80°	113.5	161.3	225.8	260.5	273.6
82.5°	72.9	120.7	172.0	197.1	207.9
85°	40.6	80.0	112.3	126.6	131.4
87.5°	16.7	34.6	45.4	51.4	51.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)