

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: P310750

Luminaire Tested: **24FCZ2-40-UNV-L82765-CP187-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: P310750
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-6500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" 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: 3620.0 lumens
Efficiency: N/A
Efficacy: 105.8 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

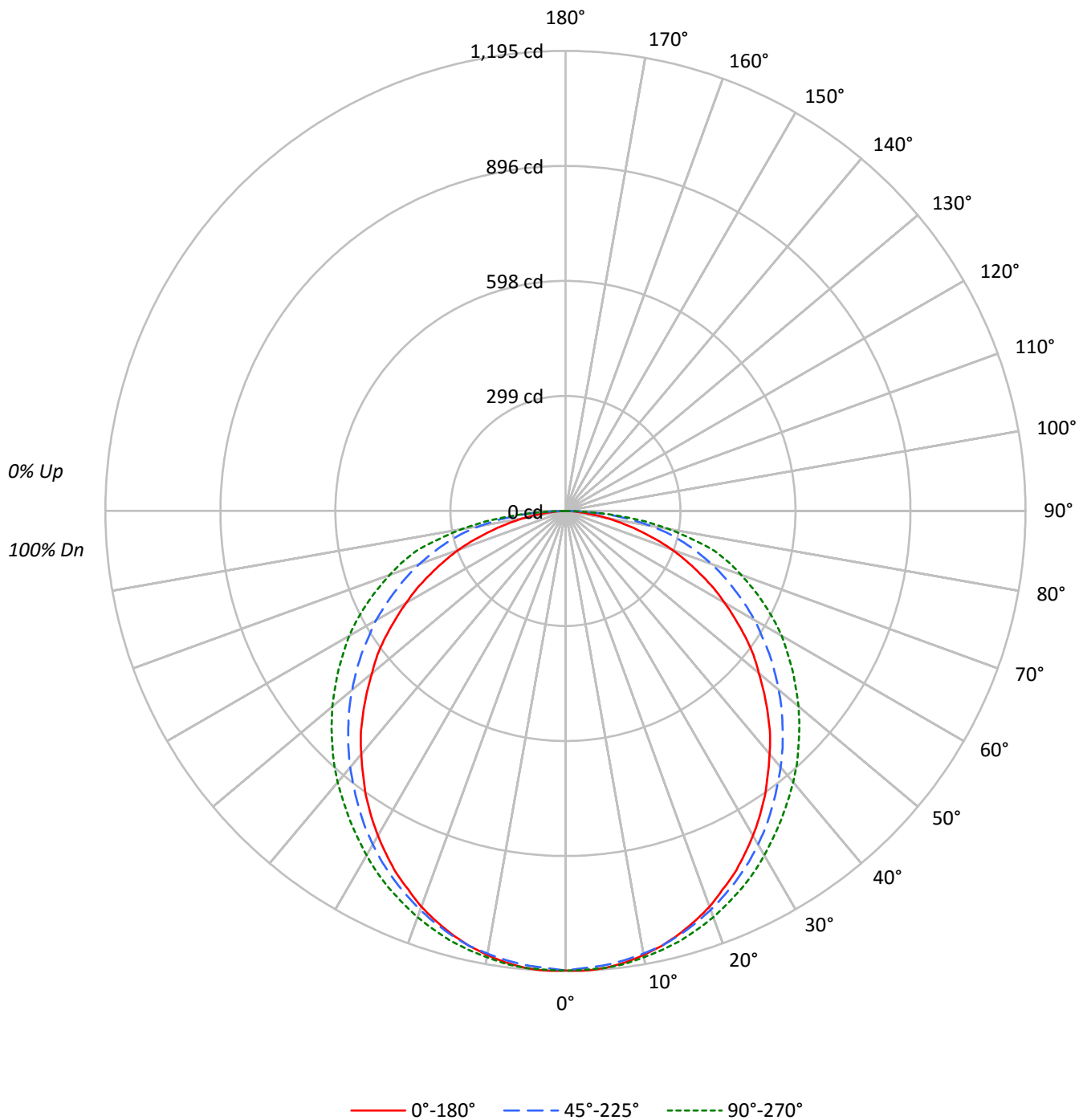
Input Watts (W): 34.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1606	1606	1606
5°	1609	1599	1609
10°	1600	1595	1608
15°	1586	1589	1609
20°	1567	1579	1608
25°	1542	1567	1606
30°	1513	1554	1605
35°	1484	1539	1606
40°	1449	1527	1616
45°	1415	1517	1629
50°	1373	1513	1654
55°	1338	1516	1688
60°	1286	1529	1745
65°	1227	1545	1809
70°	1162	1592	1909
75°	1037	1661	2086
80°	884	1759	2131
85°	630	1743	2039



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.0	3.1
10°-20°	323.1	8.9
20°-30°	488.0	13.5
30°-40°	588.1	16.2
40°-50°	617.4	17.1
50°-60°	577.6	16.0
60°-70°	477.0	13.2
70°-80°	325.0	9.0
80°-90°	110.8	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°	924.0	25.5
0°-40°	1512.1	41.8
0°-60°	2707.1	74.8
0°-90°	3620.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3620.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1194	1194	1194	1194	1194	
5°	1191	1190	1184	1191	1191	113
15°	1139	1140	1141	1153	1155	321
25°	1039	1044	1056	1076	1082	478
35°	903	913	937	968	978	564
45°	744	759	798	841	856	573
55°	570	593	646	699	719	509
65°	386	418	485	546	568	382
75°	199	245	320	380	401	213
85°	41	80	113	127	132	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1193.8	1193.8	1193.8	1193.8	1193.8
2.5°	1195.0	1193.8	1187.8	1193.8	1192.6
5°	1191.4	1190.2	1184.2	1191.4	1191.4
7.5°	1183.0	1183.0	1177.0	1185.4	1186.6
10°	1171.0	1171.0	1167.4	1177.0	1177.0
12.5°	1156.6	1156.6	1156.6	1166.2	1167.4
15°	1138.6	1139.8	1141.0	1153.0	1155.4
17.5°	1117.0	1119.4	1123.0	1137.4	1139.8
20°	1094.2	1096.6	1102.6	1119.4	1123.0
22.5°	1065.3	1071.3	1079.7	1099.0	1102.6
25°	1038.9	1043.7	1055.7	1076.1	1082.1
27.5°	1006.5	1013.7	1029.3	1050.9	1059.3
30°	974.1	981.3	1000.5	1025.7	1032.9
32.5°	939.2	950.0	970.4	996.9	1005.3
35°	903.2	912.8	936.8	968.0	977.7
37.5°	863.6	876.8	903.2	936.8	948.8
40°	825.1	839.5	869.6	905.6	920.0
42.5°	786.7	801.1	834.7	875.6	890.0
45°	743.5	759.1	797.5	840.7	856.3
47.5°	700.2	719.4	761.5	807.1	823.9
50°	655.8	677.4	723.0	771.1	790.3
52.5°	616.1	636.6	684.6	736.2	754.3
55°	570.5	593.3	646.2	699.0	719.4
57.5°	523.7	548.9	605.3	663.0	683.4
60°	478.0	505.6	568.1	625.7	648.6
62.5°	433.6	461.2	526.1	586.1	608.9
65°	385.5	418.0	485.2	546.5	568.1
67.5°	339.9	374.7	445.6	505.6	527.3
70°	295.5	329.1	404.8	463.6	485.2
72.5°	247.4	285.9	361.5	422.8	445.6
75°	199.4	245.0	319.5	379.5	401.2
77.5°	154.9	201.8	276.2	325.5	336.3
80°	114.1	162.1	227.0	261.8	275.0
82.5°	73.3	121.3	173.0	198.2	209.0
85°	40.8	80.5	112.9	127.3	132.1
87.5°	16.8	34.8	45.6	51.6	51.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)