

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: P310744

Luminaire Tested: **24FCZ2-40-UNV-L82765-CP187-W2A-U-3500K**

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: P310744
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-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (168) 3500K 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: 3383.0 lumens
Efficiency: N/A
Efficacy: 102.8 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

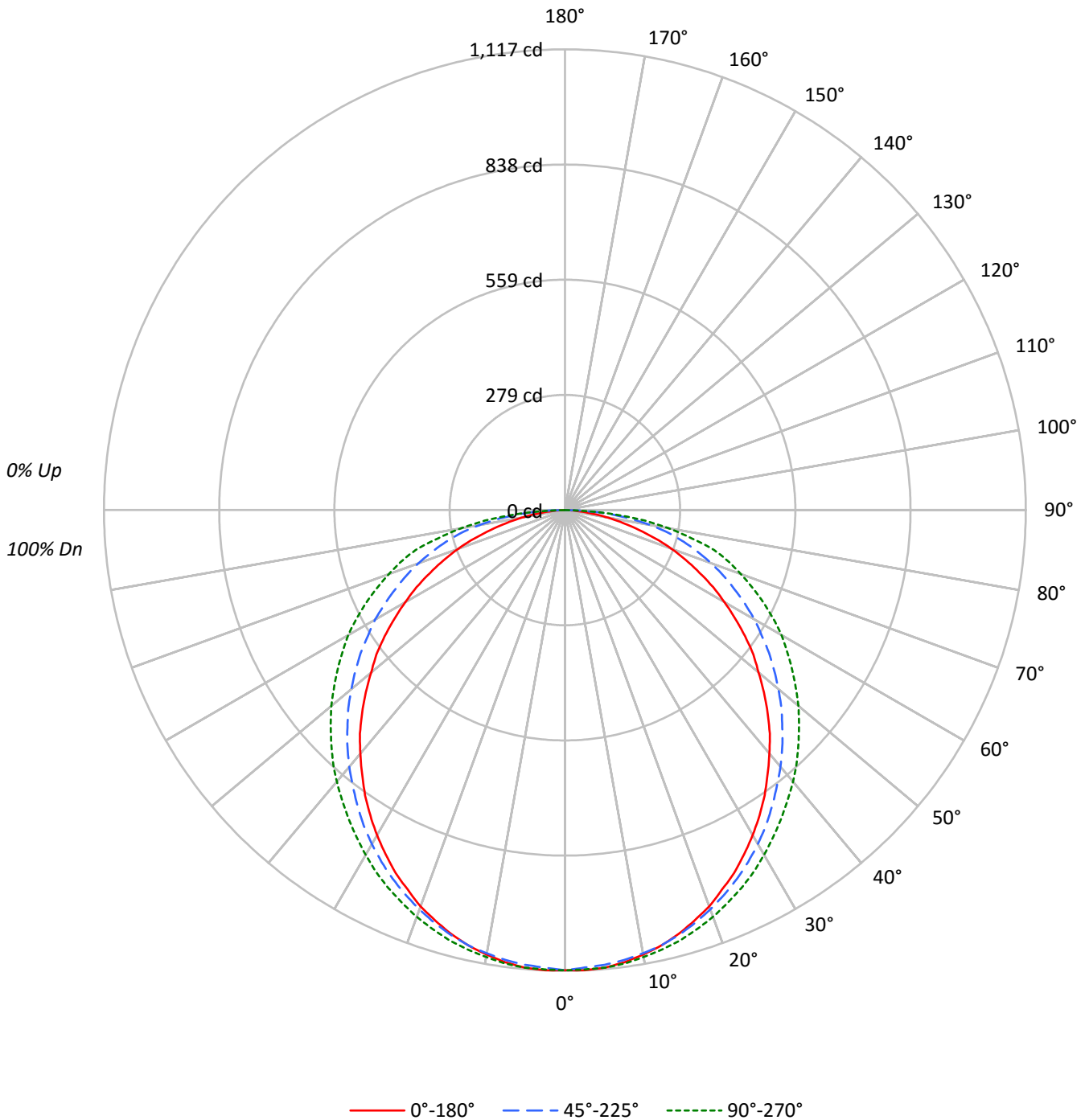
Input Watts (W): 32.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1501	1501	1501
5°	1504	1495	1504
10°	1495	1491	1503
15°	1482	1485	1504
20°	1464	1475	1503
25°	1441	1465	1501
30°	1414	1453	1500
35°	1386	1438	1501
40°	1354	1427	1510
45°	1322	1418	1523
50°	1283	1414	1546
55°	1251	1417	1577
60°	1202	1429	1631
65°	1147	1444	1690
70°	1086	1488	1784
75°	968	1552	1949
80°	826	1643	1991
85°	590	1629	1907



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.6	3.1
10°-20°	301.9	8.9
20°-30°	456.0	13.5
30°-40°	549.6	16.2
40°-50°	577.0	17.1
50°-60°	539.8	16.0
60°-70°	445.8	13.2
70°-80°	303.8	9.0
80°-90°	103.6	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°	863.5	25.5
0°-40°	1413.1	41.8
0°-60°	2529.9	74.8
0°-90°	3383.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3383.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1116	1116	1116	1116	1116	
5°	1113	1112	1107	1113	1113	106
15°	1064	1065	1066	1078	1080	300
25°	971	975	987	1006	1011	447
35°	844	853	876	905	914	527
45°	695	709	745	786	800	536
55°	533	554	604	653	672	476
65°	360	391	454	511	531	357
75°	186	229	299	355	375	199
85°	38	75	106	119	124	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1115.7	1115.7	1115.7	1115.7	1115.7
2.5°	1116.8	1115.7	1110.1	1115.7	1114.6
5°	1113.4	1112.3	1106.7	1113.4	1113.4
7.5°	1105.6	1105.6	1100.0	1107.8	1108.9
10°	1094.4	1094.4	1091.0	1100.0	1100.0
12.5°	1080.9	1080.9	1080.9	1089.9	1091.0
15°	1064.1	1065.2	1066.3	1077.5	1079.8
17.5°	1043.8	1046.1	1049.5	1062.9	1065.2
20°	1022.5	1024.8	1030.4	1046.1	1049.5
22.5°	995.6	1001.2	1009.1	1027.0	1030.4
25°	970.9	975.4	986.6	1005.7	1011.3
27.5°	940.6	947.3	961.9	982.1	990.0
30°	910.3	917.0	935.0	958.5	965.3
32.5°	877.7	887.8	906.9	931.6	939.5
35°	844.1	853.0	875.5	904.7	913.6
37.5°	807.0	819.4	844.1	875.5	886.7
40°	771.1	784.6	812.6	846.3	859.8
42.5°	735.2	748.7	780.1	818.2	831.7
45°	694.8	709.4	745.3	785.7	800.3
47.5°	654.4	672.3	711.6	754.3	770.0
50°	612.8	633.0	675.7	720.6	738.6
52.5°	575.8	594.9	639.8	688.0	704.9
55°	533.1	554.5	603.9	653.2	672.3
57.5°	489.4	512.9	565.7	619.6	638.7
60°	446.7	472.5	530.9	584.8	606.1
62.5°	405.2	431.0	491.6	547.7	569.1
65°	360.3	390.6	453.5	510.7	530.9
67.5°	317.6	350.2	416.4	472.5	492.7
70°	276.1	307.5	378.3	433.3	453.5
72.5°	231.2	267.1	337.8	395.1	416.4
75°	186.3	229.0	298.6	354.7	374.9
77.5°	144.8	188.6	258.2	304.2	314.3
80°	106.6	151.5	212.1	244.7	257.0
82.5°	68.5	113.4	161.6	185.2	195.3
85°	38.2	75.2	105.5	119.0	123.5
87.5°	15.7	32.6	42.7	48.3	48.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)