

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: P310629

Luminaire Tested: **24FCZ2-35-UNV-L82765-CA08-W2A-U-4500K**

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: P310629
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: 24FCZ2-35-UNV-L82765-CA08-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 4500K 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: 3303.0 lumens
Efficiency: N/A
Efficacy: 115.9 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

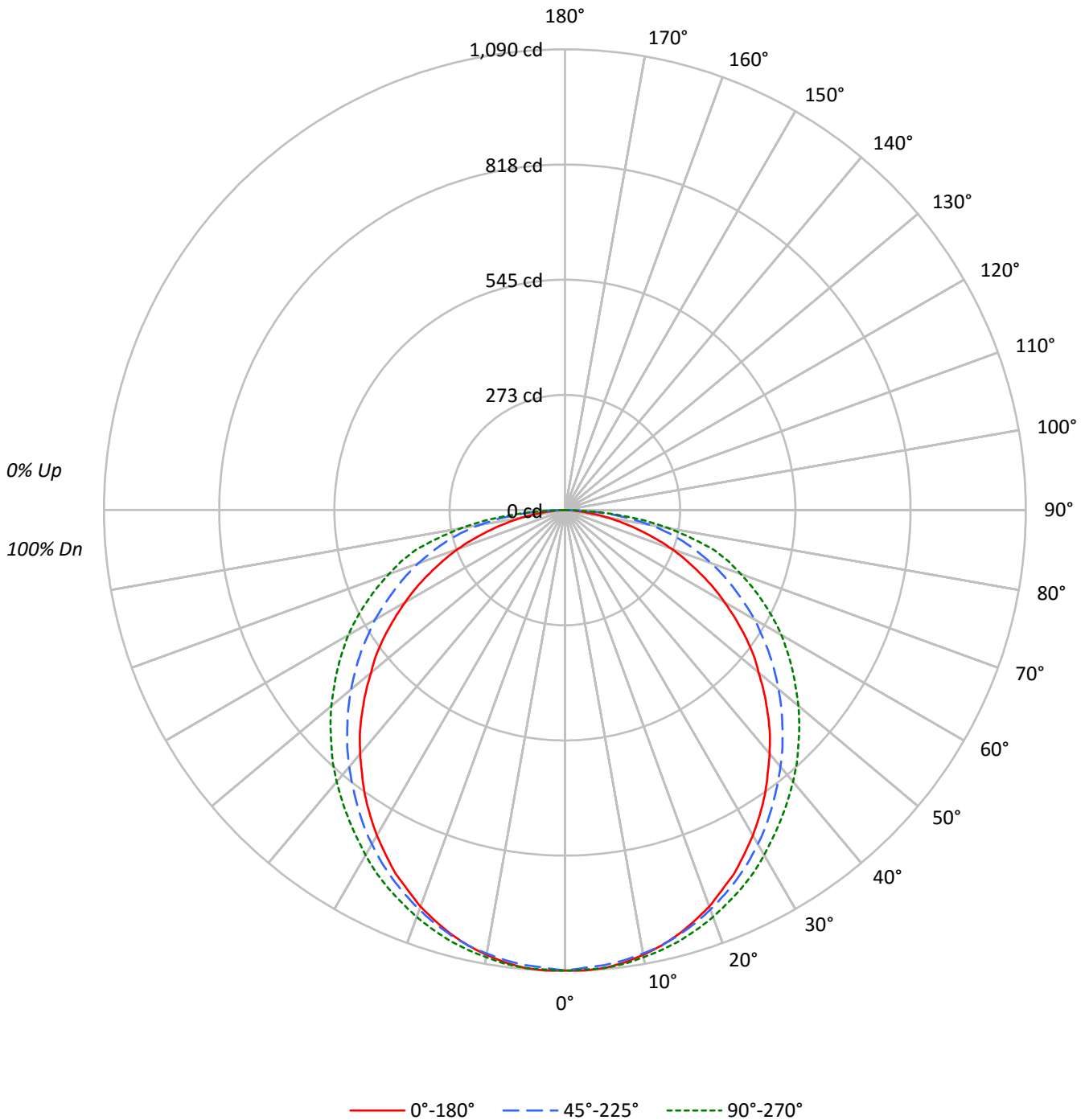
Input Watts (W): 28.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1466	1466	1466
5°	1468	1459	1468
10°	1460	1455	1467
15°	1447	1450	1468
20°	1429	1440	1467
25°	1407	1430	1466
30°	1381	1418	1464
35°	1354	1404	1465
40°	1322	1394	1474
45°	1291	1385	1487
50°	1252	1381	1509
55°	1221	1383	1540
60°	1174	1395	1593
65°	1120	1409	1650
70°	1061	1453	1742
75°	946	1515	1903
80°	807	1605	1945
85°	576	1590	1860



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.1	3.1
10°-20°	294.8	8.9
20°-30°	445.2	13.5
30°-40°	536.6	16.2
40°-50°	563.3	17.1
50°-60°	527.0	16.0
60°-70°	435.2	13.2
70°-80°	296.6	9.0
80°-90°	101.1	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°	843.1	25.5
0°-40°	1379.7	41.8
0°-60°	2470.0	74.8
0°-90°	3303.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3303.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1089	1089	1089	1089	1089	
5°	1087	1086	1080	1087	1087	103
15°	1039	1040	1041	1052	1054	293
25°	948	952	963	982	987	436
35°	824	833	855	883	892	515
45°	678	693	728	767	781	523
55°	520	541	590	638	656	465
65°	352	381	443	499	518	349
75°	182	224	292	346	366	194
85°	37	73	103	116	120	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1089.3	1089.3	1089.3	1089.3	1089.3
2.5°	1090.4	1089.3	1083.8	1089.3	1088.2
5°	1087.1	1086.0	1080.5	1087.1	1087.1
7.5°	1079.4	1079.4	1074.0	1081.6	1082.7
10°	1068.5	1068.5	1065.2	1074.0	1074.0
12.5°	1055.3	1055.3	1055.3	1064.1	1065.2
15°	1038.9	1040.0	1041.1	1052.0	1054.2
17.5°	1019.2	1021.4	1024.6	1037.8	1040.0
20°	998.3	1000.5	1006.0	1021.4	1024.6
22.5°	972.0	977.5	985.2	1002.7	1006.0
25°	947.9	952.3	963.3	981.9	987.4
27.5°	918.3	924.9	939.2	958.9	966.6
30°	888.8	895.3	912.9	935.9	942.5
32.5°	857.0	866.8	885.5	909.6	917.2
35°	824.1	832.9	854.8	883.3	892.0
37.5°	787.9	800.0	824.1	854.8	865.7
40°	752.9	766.0	793.4	826.3	839.4
42.5°	717.8	730.9	761.6	798.9	812.0
45°	678.3	692.6	727.7	767.1	781.4
47.5°	638.9	656.4	694.8	736.4	751.8
50°	598.3	618.1	659.7	703.6	721.1
52.5°	562.2	580.8	624.6	671.8	688.2
55°	520.5	541.4	589.6	637.8	656.4
57.5°	477.8	500.8	552.3	604.9	623.6
60°	436.2	461.4	518.3	571.0	591.8
62.5°	395.6	420.8	480.0	534.8	555.6
65°	351.8	381.4	442.7	498.6	518.3
67.5°	310.1	341.9	406.6	461.4	481.1
70°	269.6	300.3	369.3	423.0	442.7
72.5°	225.8	260.8	329.9	385.7	406.6
75°	181.9	223.6	291.5	346.3	366.0
77.5°	141.4	184.1	252.1	297.0	306.8
80°	104.1	147.9	207.1	238.9	251.0
82.5°	66.8	110.7	157.8	180.8	190.7
85°	37.3	73.4	103.0	116.2	120.5
87.5°	15.3	31.8	41.6	47.1	47.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)