

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: P310631

Luminaire Tested: **24FCZ2-35-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: P310631
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-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: 3382.0 lumens
Efficiency: N/A
Efficacy: 117.4 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

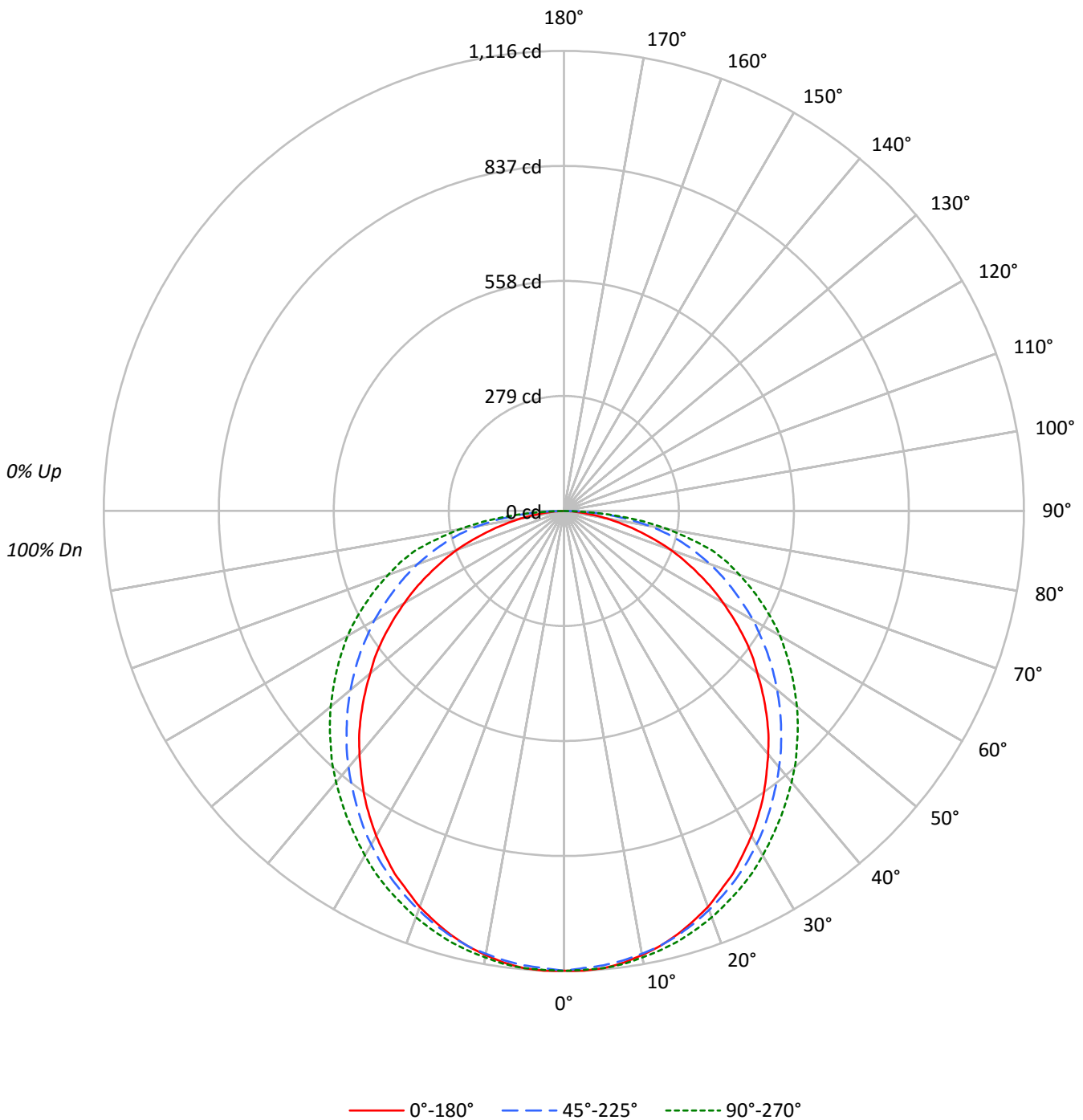
Input Watts (W): 28.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310631

CATALOG NUMBER: 24FCZ2-35-UNV-L82765-CA08-W2A-U-5500K

Luminous Intensity Polar Plot





TEST NUMBER: P310631

CATALOG NUMBER: 24FCZ2-35-UNV-L82765-CA08-W2A-U-5500K

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°	1503	1494	1503
10°	1495	1490	1502
15°	1482	1485	1504
20°	1464	1475	1502
25°	1441	1464	1501
30°	1414	1452	1499
35°	1386	1438	1500
40°	1354	1427	1510
45°	1322	1418	1522
50°	1283	1414	1545
55°	1250	1416	1577
60°	1202	1428	1630
65°	1147	1443	1690
70°	1086	1487	1783
75°	968	1552	1948
80°	826	1643	1991
85°	590	1629	1905



TEST NUMBER: P310631

CATALOG NUMBER: 24FCZ2-35-UNV-L82765-CA08-W2A-U-5500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.6	3.1
10°-20°	301.8	8.9
20°-30°	455.9	13.5
30°-40°	549.4	16.2
40°-50°	576.8	17.1
50°-60°	539.6	16.0
60°-70°	445.6	13.2
70°-80°	303.7	9.0
80°-90°	103.5	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°	863.3	25.5
0°-40°	1412.7	41.8
0°-60°	2529.1	74.8
0°-90°	3382.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3382.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1115	1115	1115	1115	1115	
5°	1113	1112	1106	1113	1113	106
15°	1064	1065	1066	1077	1079	300
25°	971	975	986	1005	1011	447
35°	844	853	875	904	913	527
45°	695	709	745	786	800	536
55°	533	554	604	653	672	476
65°	360	390	453	510	531	357
75°	186	229	298	355	375	199
85°	38	75	106	119	123	48
90°	0	0	0	0	0	



TEST NUMBER: P310631

CATALOG NUMBER: 24FC22-35-UNV-L82765-CA08-W2A-U-5500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1115.4	1115.4	1115.4	1115.4	1115.4
2.5°	1116.5	1115.4	1109.7	1115.4	1114.2
5°	1113.1	1112.0	1106.4	1113.1	1113.1
7.5°	1105.3	1105.3	1099.6	1107.5	1108.6
10°	1094.0	1094.0	1090.7	1099.6	1099.6
12.5°	1080.6	1080.6	1080.6	1089.5	1090.7
15°	1063.7	1064.9	1066.0	1077.2	1079.4
17.5°	1043.5	1045.8	1049.2	1062.6	1064.9
20°	1022.2	1024.5	1030.1	1045.8	1049.2
22.5°	995.3	1000.9	1008.8	1026.7	1030.1
25°	970.6	975.1	986.3	1005.4	1011.0
27.5°	940.3	947.0	961.6	981.8	989.7
30°	910.0	916.7	934.7	958.3	965.0
32.5°	877.5	887.6	906.6	931.3	939.2
35°	843.8	852.8	875.2	904.4	913.4
37.5°	806.8	819.1	843.8	875.2	886.4
40°	770.9	784.3	812.4	846.1	859.5
42.5°	735.0	748.4	779.9	818.0	831.5
45°	694.6	709.2	745.1	785.5	800.0
47.5°	654.2	672.1	711.4	754.0	769.8
50°	612.7	632.9	675.5	720.4	738.3
52.5°	575.6	594.7	639.6	687.8	704.7
55°	533.0	554.3	603.7	653.1	672.1
57.5°	489.2	512.8	565.5	619.4	638.5
60°	446.6	472.4	530.7	584.6	605.9
62.5°	405.1	430.9	491.5	547.6	568.9
65°	360.2	390.5	453.3	510.5	530.7
67.5°	317.6	350.1	416.3	472.4	492.6
70°	276.0	307.5	378.1	433.1	453.3
72.5°	231.1	267.1	337.7	395.0	416.3
75°	186.3	228.9	298.5	354.6	374.8
77.5°	144.7	188.5	258.1	304.1	314.2
80°	106.6	151.5	212.1	244.6	257.0
82.5°	68.4	113.3	161.6	185.1	195.2
85°	38.2	75.2	105.5	118.9	123.4
87.5°	15.7	32.5	42.6	48.2	48.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)