

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: P309402

Luminaire Tested: **24FCZ2-40-UNV-L82765-HRP-CP250-W2A-U-3000K**

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: P309402
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
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-HRP-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 3000K 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: 2460.0 lumens
Efficiency: N/A
Efficacy: 75.7 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

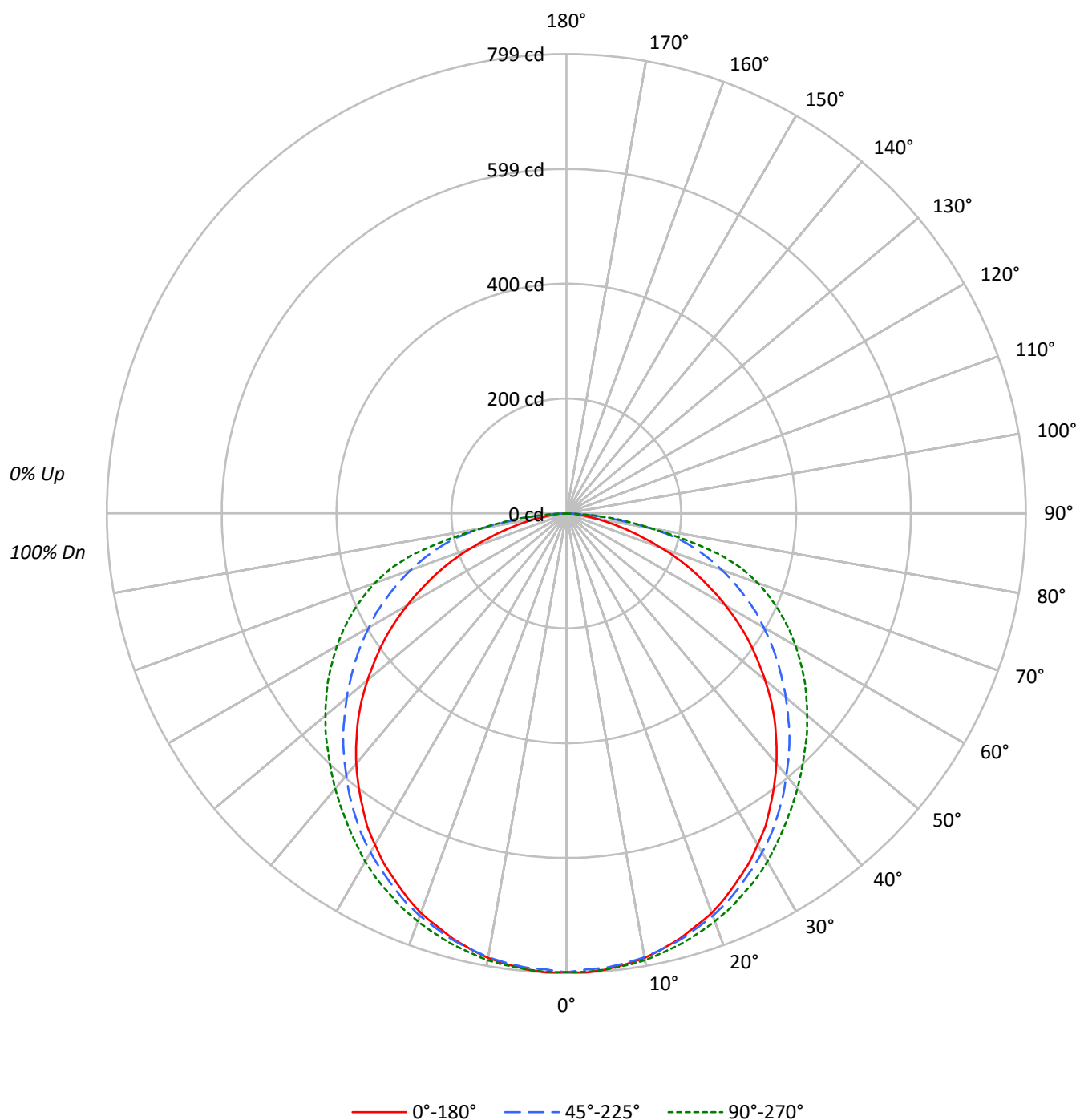
Input Watts (W): 32.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P309402

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-HRP-CP250-W2A-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P309402

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-HRP-CP250-W2A-U-3000K

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	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	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	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1074	1074	1074
5°	1075	1071	1075
10°	1072	1071	1078
15°	1066	1069	1079
20°	1059	1066	1081
25°	1046	1061	1082
30°	1034	1058	1086
35°	1017	1052	1088
40°	999	1046	1098
45°	976	1044	1115
50°	944	1043	1145
55°	911	1051	1186
60°	859	1067	1239
65°	793	1092	1308
70°	693	1130	1394
75°	562	1188	1440
80°	415	1165	1165
85°	318	858	969



TEST NUMBER: P309402

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-HRP-CP250-W2A-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.6	3.1
10°-20°	217.1	8.8
20°-30°	330.5	13.4
30°-40°	401.4	16.3
40°-50°	424.0	17.2
50°-60°	400.1	16.3
60°-70°	332.7	13.5
70°-80°	218.9	8.9
80°-90°	59.7	2.4
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°	623.3	25.3
0°-40°	1024.6	41.7
0°-60°	1848.8	75.2
0°-90°	2460.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2460.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	798	798	798	798	798	
5°	796	796	793	796	796	76
15°	765	766	767	774	774	216
25°	704	709	715	727	729	325
35°	619	626	641	657	662	387
45°	513	523	549	576	586	395
55°	388	405	448	490	506	346
65°	249	278	343	393	411	246
75°	108	158	229	271	277	117
85°	21	45	56	62	63	25
90°	0	0	0	0	0	



TEST NUMBER: P309402

CATALOG NUMBER: 24FCZ2-40-UNV-L82765-HRP-CP250-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	798.1	798.1	798.1	798.1	798.1
2.5°	799.2	798.1	794.0	798.1	798.1
5°	796.1	796.1	793.0	796.1	796.1
7.5°	790.9	790.9	788.9	793.0	793.0
10°	784.8	784.8	783.7	788.9	788.9
12.5°	775.5	776.5	775.5	781.7	781.7
15°	765.2	766.2	767.3	774.5	774.5
17.5°	751.8	753.9	755.9	764.2	765.2
20°	739.4	740.5	744.6	753.9	754.9
22.5°	723.0	726.1	731.2	740.5	743.6
25°	704.4	708.6	714.7	727.1	729.1
27.5°	686.9	690.0	698.3	711.6	715.8
30°	665.3	670.4	680.7	694.1	699.3
32.5°	644.7	649.8	662.2	676.6	680.7
35°	619.0	626.2	640.6	657.1	662.2
37.5°	594.2	601.4	619.0	637.5	643.7
40°	568.5	576.7	595.3	616.9	625.1
42.5°	540.7	552.0	572.6	596.3	605.6
45°	512.9	523.2	548.9	575.7	586.0
47.5°	483.0	495.4	523.2	555.1	567.5
50°	451.1	466.5	498.5	533.5	546.9
52.5°	419.2	436.7	472.7	511.8	526.3
55°	388.3	404.7	448.0	490.2	505.7
57.5°	354.3	374.9	422.2	467.6	483.0
60°	319.3	341.9	396.5	443.9	460.4
62.5°	284.2	310.0	371.8	419.2	436.7
65°	249.2	278.1	342.9	393.4	410.9
67.5°	215.2	247.2	316.2	366.6	384.1
70°	176.1	216.3	287.3	336.8	354.3
72.5°	140.1	186.4	259.5	305.9	321.3
75°	108.1	157.6	228.6	270.9	277.0
77.5°	79.3	128.7	196.7	211.1	212.2
80°	53.6	103.0	150.4	148.3	150.4
82.5°	35.0	77.2	94.7	106.1	107.1
85°	20.6	45.3	55.6	61.8	62.8
87.5°	10.3	15.4	19.6	20.6	22.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)