

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: P310083

Luminaire Tested: **24FCZ2-40-UNV-L82765-RDP-CP250-W2A-U-5700K**

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: P310083
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
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-RDP-CP250-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (168) 5700K 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: 2408.0 lumens
Efficiency: N/A
Efficacy: 71.7 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

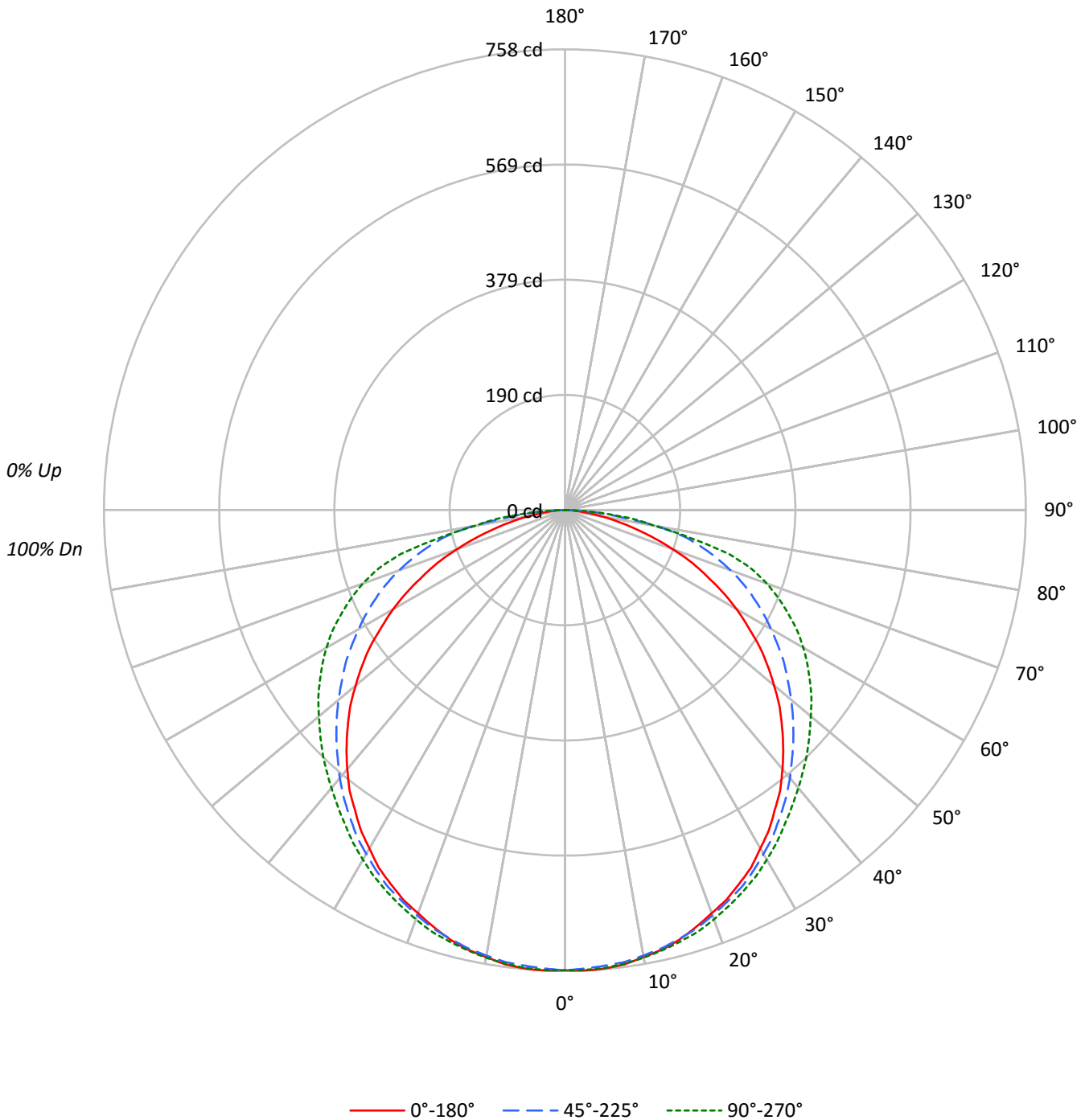
Input Watts (W): 33.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1019	1019	1019
5°	1023	1016	1021
10°	1020	1017	1022
15°	1018	1017	1023
20°	1011	1016	1026
25°	1007	1018	1028
30°	998	1015	1032
35°	989	1012	1036
40°	978	1011	1049
45°	961	1011	1073
50°	940	1018	1105
55°	916	1034	1154
60°	878	1054	1218
65°	821	1091	1293
70°	747	1142	1391
75°	633	1205	1453
80°	500	1213	1175
85°	369	922	1033



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.8	3.0
10°-20°	206.7	8.6
20°-30°	316.1	13.1
30°-40°	386.5	16.0
40°-50°	411.9	17.1
50°-60°	393.8	16.4
60°-70°	333.6	13.9
70°-80°	224.2	9.3
80°-90°	63.2	2.6
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°	594.7	24.7
0°-40°	981.2	40.7
0°-60°	1786.9	74.2
0°-90°	2408.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2408.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	757	757	757	757	757	
5°	757	756	752	756	756	72
15°	731	731	730	736	735	206
25°	678	681	686	692	693	313
35°	602	607	616	628	631	377
45°	505	514	532	554	564	390
55°	391	405	441	475	492	348
65°	258	284	343	388	406	256
75°	122	166	232	271	280	130
85°	24	49	60	64	67	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	757.2	757.2	757.2	757.2	757.2
2.5°	758.4	758.4	754.9	757.2	757.2
5°	757.2	756.1	752.5	756.1	756.1
7.5°	753.7	752.5	750.1	753.7	752.5
10°	746.5	746.5	744.1	747.7	747.7
12.5°	740.5	739.3	738.1	742.9	741.7
15°	731.0	731.0	729.8	735.7	734.6
17.5°	719.0	720.2	721.4	726.2	727.4
20°	705.9	708.3	709.5	716.6	716.6
22.5°	693.9	695.1	697.5	704.7	704.7
25°	678.4	680.8	685.6	691.6	692.7
27.5°	662.9	664.1	670.1	678.4	679.6
30°	642.6	646.2	653.3	662.9	664.1
32.5°	624.7	628.3	636.6	646.2	648.6
35°	602.0	606.8	616.3	628.3	630.6
37.5°	581.7	585.3	597.2	610.3	613.9
40°	556.6	563.8	575.7	591.2	597.2
42.5°	531.5	538.7	553.0	573.3	580.5
45°	505.2	513.6	531.5	554.2	563.8
47.5°	479.0	488.5	508.8	535.1	545.8
50°	449.1	461.0	486.1	516.0	527.9
52.5°	420.4	434.8	462.2	495.7	511.2
55°	390.6	404.9	440.7	475.4	492.1
57.5°	357.1	376.2	415.6	455.1	473.0
60°	326.1	344.0	391.8	434.8	452.7
62.5°	292.6	316.5	367.9	413.3	431.2
65°	258.0	284.3	342.8	388.2	406.1
67.5°	226.9	255.6	317.7	363.1	381.0
70°	189.9	225.7	290.2	335.6	353.5
72.5°	155.3	194.7	261.6	305.8	322.5
75°	121.8	166.0	231.7	271.1	279.5
77.5°	90.8	137.4	200.7	217.4	211.4
80°	64.5	109.9	156.5	148.1	151.7
82.5°	41.8	83.6	96.7	109.9	113.5
85°	23.9	49.0	59.7	64.5	66.9
87.5°	10.7	17.9	23.9	23.9	22.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)