

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: P310004

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-RDP-CA125-W2A-U-2700K**

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: P310004
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: 24FCZ2-40HE-UNV-L82765-RDP-CA125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (336) 2700K 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: 2290.0 lumens
Efficiency: N/A
Efficacy: 75.3 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

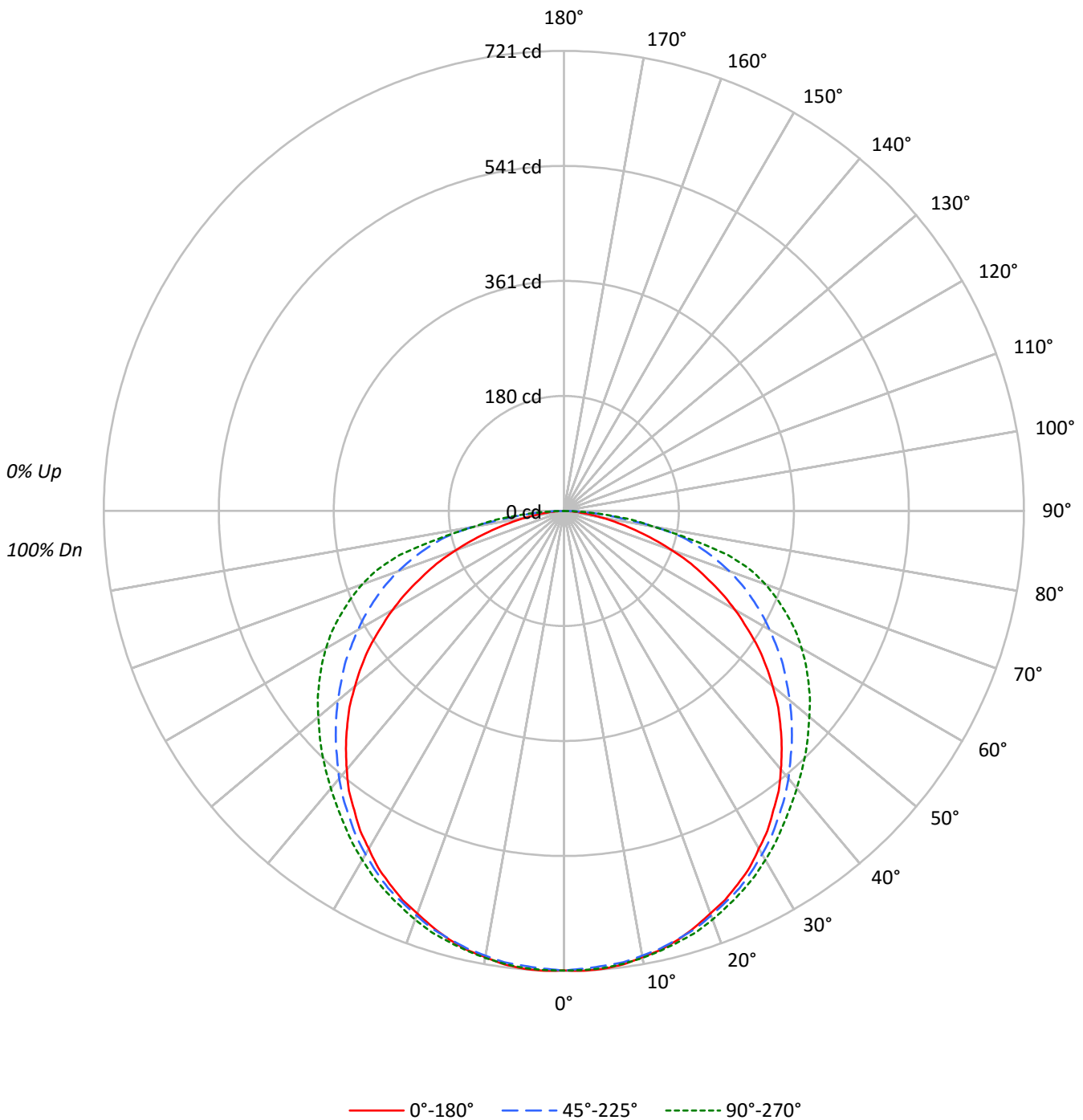
Input Watts (W): 30.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	68	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°	969	969	969
5°	973	967	971
10°	970	967	972
15°	968	967	973
20°	961	966	976
25°	958	968	978
30°	949	965	981
35°	940	963	985
40°	930	962	997
45°	914	962	1020
50°	894	968	1051
55°	871	983	1098
60°	834	1003	1158
65°	781	1038	1230
70°	710	1086	1323
75°	603	1146	1382
80°	475	1153	1118
85°	350	877	982



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.3	3.0
10°-20°	196.6	8.6
20°-30°	300.6	13.1
30°-40°	367.5	16.0
40°-50°	391.7	17.1
50°-60°	374.5	16.4
60°-70°	317.3	13.9
70°-80°	213.2	9.3
80°-90°	60.1	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°	565.6	24.7
0°-40°	933.1	40.7
0°-60°	1699.4	74.2
0°-90°	2290.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2290.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	720	720	720	720	720	
5°	720	719	716	719	719	68
15°	695	695	694	700	699	196
25°	645	647	652	658	659	297
35°	572	577	586	598	600	359
45°	480	488	506	527	536	371
55°	371	385	419	452	468	331
65°	245	270	326	369	386	244
75°	116	158	220	258	266	124
85°	23	47	57	61	64	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	720.1	720.1	720.1	720.1	720.1
2.5°	721.3	721.3	717.9	720.1	720.1
5°	720.1	719.0	715.6	719.0	719.0
7.5°	716.7	715.6	713.3	716.7	715.6
10°	709.9	709.9	707.6	711.1	711.1
12.5°	704.2	703.1	702.0	706.5	705.4
15°	695.2	695.2	694.0	699.7	698.6
17.5°	683.8	684.9	686.1	690.6	691.7
20°	671.3	673.6	674.7	681.5	681.5
22.5°	659.9	661.1	663.3	670.2	670.2
25°	645.2	647.4	652.0	657.7	658.8
27.5°	630.4	631.5	637.2	645.2	646.3
30°	611.1	614.5	621.3	630.4	631.5
32.5°	594.1	597.5	605.4	614.5	616.8
35°	572.5	577.0	586.1	597.5	599.7
37.5°	553.2	556.6	567.9	580.4	583.8
40°	529.3	536.1	547.5	562.3	567.9
42.5°	505.5	512.3	525.9	545.2	552.0
45°	480.5	488.4	505.5	527.0	536.1
47.5°	455.5	464.6	483.9	508.9	519.1
50°	427.1	438.4	462.3	490.7	502.1
52.5°	399.8	413.5	439.6	471.4	486.2
55°	371.4	385.1	419.1	452.1	468.0
57.5°	339.6	357.8	395.3	432.8	449.8
60°	310.1	327.1	372.6	413.5	430.5
62.5°	278.3	301.0	349.8	393.0	410.0
65°	245.3	270.3	326.0	369.2	386.2
67.5°	215.8	243.1	302.1	345.3	362.3
70°	180.6	214.7	276.0	319.2	336.2
72.5°	147.7	185.1	248.8	290.8	306.7
75°	115.9	157.9	220.4	257.8	265.8
77.5°	86.3	130.6	190.8	206.7	201.0
80°	61.3	104.5	148.8	140.8	144.3
82.5°	39.8	79.5	92.0	104.5	107.9
85°	22.7	46.6	56.8	61.3	63.6
87.5°	10.2	17.0	22.7	22.7	21.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)