

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: P310013

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-RDP-CP125-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: P310013
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-CP125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB 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: 2245.0 lumens
Efficiency: N/A
Efficacy: 73.8 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

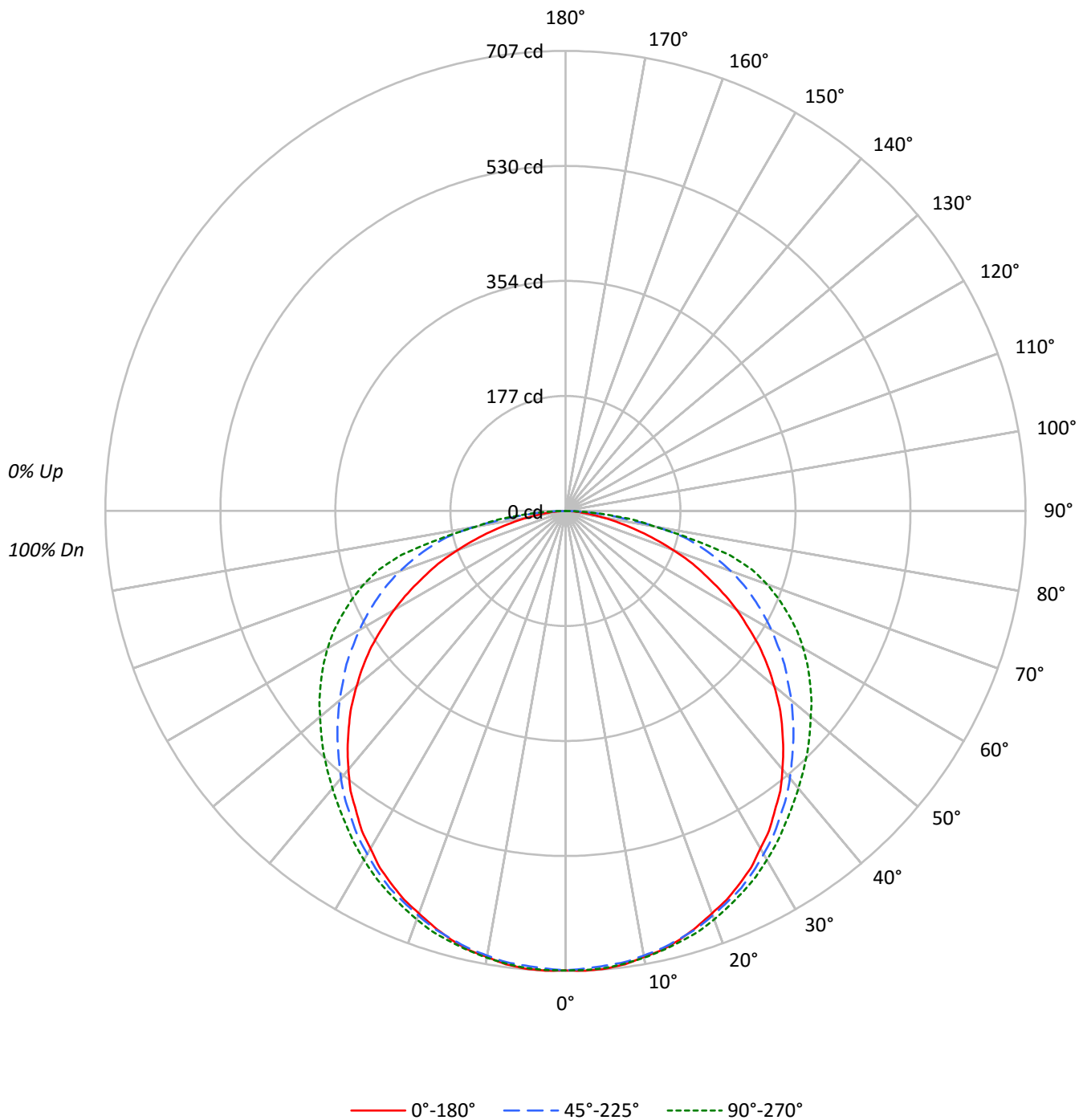
Input Watts (W): 30.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	950	950	950
5°	954	947	952
10°	951	948	952
15°	949	948	954
20°	942	947	957
25°	939	949	959
30°	931	946	962
35°	922	944	966
40°	911	943	978
45°	896	943	1000
50°	876	949	1030
55°	854	964	1076
60°	818	983	1136
65°	766	1018	1205
70°	697	1065	1297
75°	591	1123	1355
80°	466	1130	1096
85°	344	860	963



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.0	3.0
10°-20°	192.7	8.6
20°-30°	294.7	13.1
30°-40°	360.3	16.0
40°-50°	384.0	17.1
50°-60°	367.2	16.4
60°-70°	311.0	13.9
70°-80°	209.1	9.3
80°-90°	59.0	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°	554.4	24.7
0°-40°	914.7	40.7
0°-60°	1665.9	74.2
0°-90°	2245.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2245.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	706	706	706	706	706	
5°	706	705	702	705	705	67
15°	682	682	680	686	685	192
25°	632	635	639	645	646	292
35°	561	566	575	586	588	352
45°	471	479	496	517	526	363
55°	364	378	411	443	459	324
65°	240	265	320	362	379	239
75°	114	155	216	253	261	122
85°	22	46	56	60	62	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	706.0	706.0	706.0	706.0	706.0
2.5°	707.1	707.1	703.8	706.0	706.0
5°	706.0	704.9	701.5	704.9	704.9
7.5°	702.6	701.5	699.3	702.6	701.5
10°	696.0	696.0	693.7	697.1	697.1
12.5°	690.4	689.3	688.2	692.6	691.5
15°	681.5	681.5	680.4	685.9	684.8
17.5°	670.4	671.5	672.6	677.0	678.1
20°	658.1	660.3	661.4	668.1	668.1
22.5°	647.0	648.1	650.3	657.0	657.0
25°	632.5	634.7	639.2	644.7	645.9
27.5°	618.0	619.1	624.7	632.5	633.6
30°	599.1	602.4	609.1	618.0	619.1
32.5°	582.4	585.7	593.5	602.4	604.7
35°	561.2	565.7	574.6	585.7	588.0
37.5°	542.3	545.6	556.8	569.0	572.4
40°	518.9	525.6	536.7	551.2	556.8
42.5°	495.5	502.2	515.6	534.5	541.2
45°	471.0	478.8	495.5	516.7	525.6
47.5°	446.5	455.4	474.4	498.9	508.9
50°	418.7	429.8	453.2	481.1	492.2
52.5°	392.0	405.3	430.9	462.1	476.6
55°	364.1	377.5	410.9	443.2	458.8
57.5°	333.0	350.8	387.5	424.3	441.0
60°	304.0	320.7	365.2	405.3	422.0
62.5°	272.8	295.1	343.0	385.3	402.0
65°	240.5	265.0	319.6	361.9	378.6
67.5°	211.6	238.3	296.2	338.5	355.2
70°	177.1	210.5	270.6	312.9	329.6
72.5°	144.8	181.5	243.9	285.1	300.7
75°	113.6	154.8	216.0	252.8	260.6
77.5°	84.6	128.1	187.1	202.7	197.1
80°	60.1	102.4	145.9	138.1	141.4
82.5°	39.0	77.9	90.2	102.4	105.8
85°	22.3	45.7	55.7	60.1	62.4
87.5°	10.0	16.7	22.3	22.3	21.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)