

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: P310025

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-RDP-CP187-W2A-U-4000K**

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: P310025
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-CP187-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 4000K 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: 2339.0 lumens
Efficiency: N/A
Efficacy: 75.9 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

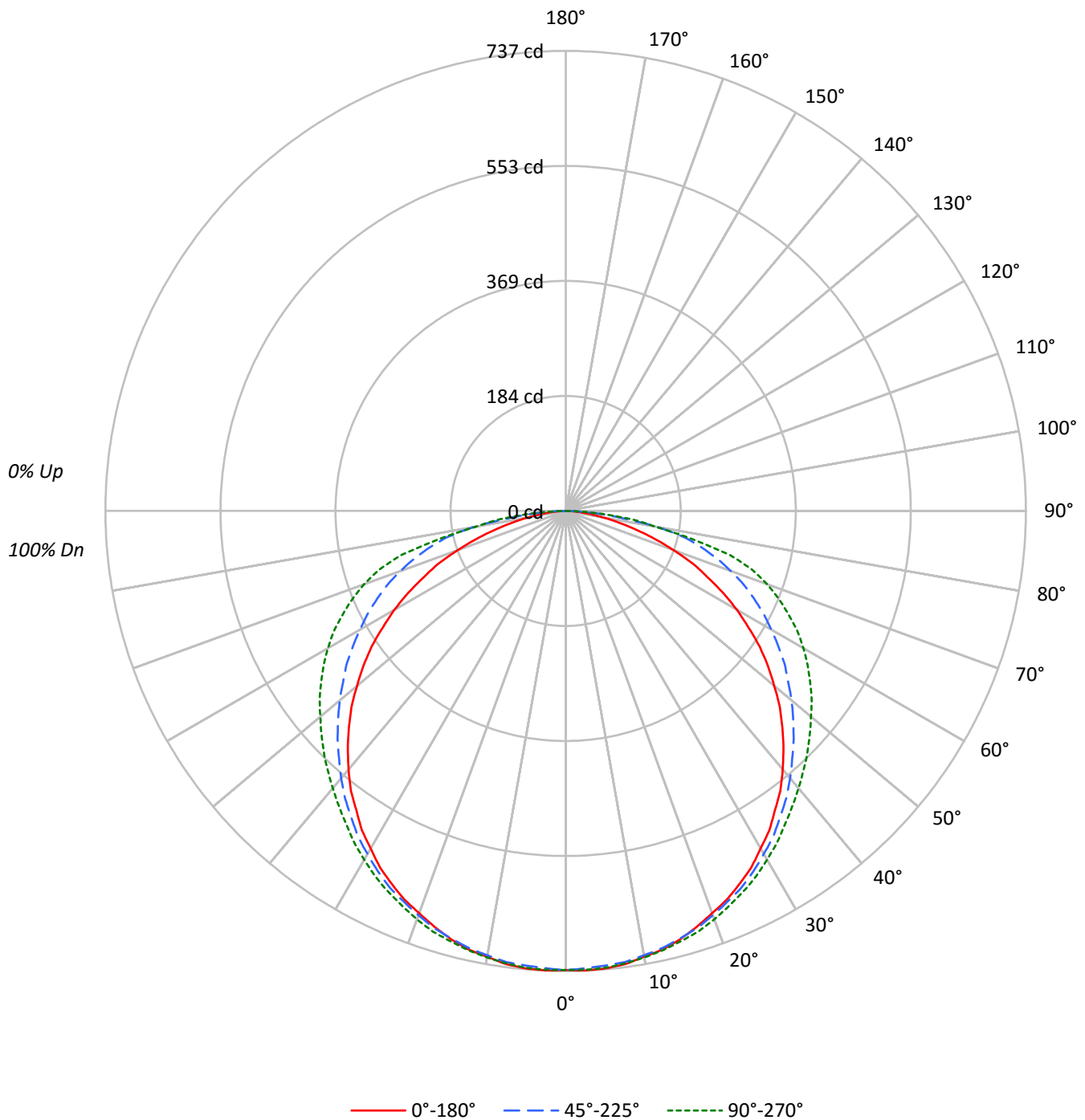
Input Watts (W): 30.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	990	990	990
5°	993	987	992
10°	991	988	992
15°	989	987	994
20°	982	987	997
25°	978	989	999
30°	970	986	1002
35°	960	983	1006
40°	950	982	1019
45°	934	982	1042
50°	913	988	1073
55°	890	1004	1121
60°	852	1024	1183
65°	798	1060	1256
70°	726	1109	1351
75°	615	1170	1411
80°	485	1178	1141
85°	358	895	1003



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.8	3.0
10°-20°	200.8	8.6
20°-30°	307.1	13.1
30°-40°	375.4	16.0
40°-50°	400.1	17.1
50°-60°	382.5	16.4
60°-70°	324.1	13.9
70°-80°	217.8	9.3
80°-90°	61.4	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°	577.7	24.7
0°-40°	953.1	40.7
0°-60°	1735.7	74.2
0°-90°	2339.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2339.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	736	736	736	736	736	
5°	736	734	731	734	734	70
15°	710	710	709	715	714	200
25°	659	661	666	672	673	304
35°	585	589	599	610	613	366
45°	491	499	516	538	548	379
55°	379	393	428	462	478	338
65°	251	276	333	377	394	249
75°	118	161	225	263	272	127
85°	23	48	58	63	65	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	735.5	735.5	735.5	735.5	735.5
2.5°	736.7	736.7	733.2	735.5	735.5
5°	735.5	734.4	730.9	734.4	734.4
7.5°	732.1	730.9	728.6	732.1	730.9
10°	725.1	725.1	722.8	726.3	726.3
12.5°	719.3	718.1	717.0	721.6	720.5
15°	710.0	710.0	708.9	714.7	713.5
17.5°	698.4	699.6	700.7	705.4	706.5
20°	685.7	688.0	689.1	696.1	696.1
22.5°	674.1	675.2	677.5	684.5	684.5
25°	659.0	661.3	665.9	671.7	672.9
27.5°	643.9	645.1	650.9	659.0	660.1
30°	624.2	627.7	634.6	643.9	645.1
32.5°	606.8	610.3	618.4	627.7	630.0
35°	584.7	589.4	598.6	610.3	612.6
37.5°	565.0	568.5	580.1	592.8	596.3
40°	540.6	547.6	559.2	574.3	580.1
42.5°	516.3	523.2	537.2	556.9	563.8
45°	490.8	498.9	516.3	538.3	547.6
47.5°	465.2	474.5	494.2	519.8	530.2
50°	436.2	447.8	472.2	501.2	512.8
52.5°	408.4	422.3	449.0	481.5	496.6
55°	379.4	393.3	428.1	461.7	478.0
57.5°	346.9	365.5	403.7	442.0	459.4
60°	316.7	334.1	380.5	422.3	439.7
62.5°	284.2	307.4	357.3	401.4	418.8
65°	250.6	276.1	333.0	377.1	394.5
67.5°	220.4	248.3	308.6	352.7	370.1
70°	184.5	219.3	281.9	326.0	343.4
72.5°	150.8	189.1	254.1	297.0	313.2
75°	118.3	161.3	225.1	263.4	271.5
77.5°	88.2	133.4	194.9	211.2	205.4
80°	62.6	106.7	152.0	143.9	147.3
82.5°	40.6	81.2	94.0	106.7	110.2
85°	23.2	47.6	58.0	62.6	65.0
87.5°	10.4	17.4	23.2	23.2	22.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)