

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: P310008

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-RDP-CA125-W2A-U-4500K**

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: P310008
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-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (336) 4500K 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: 2535.0 lumens
Efficiency: N/A
Efficacy: 81.8 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

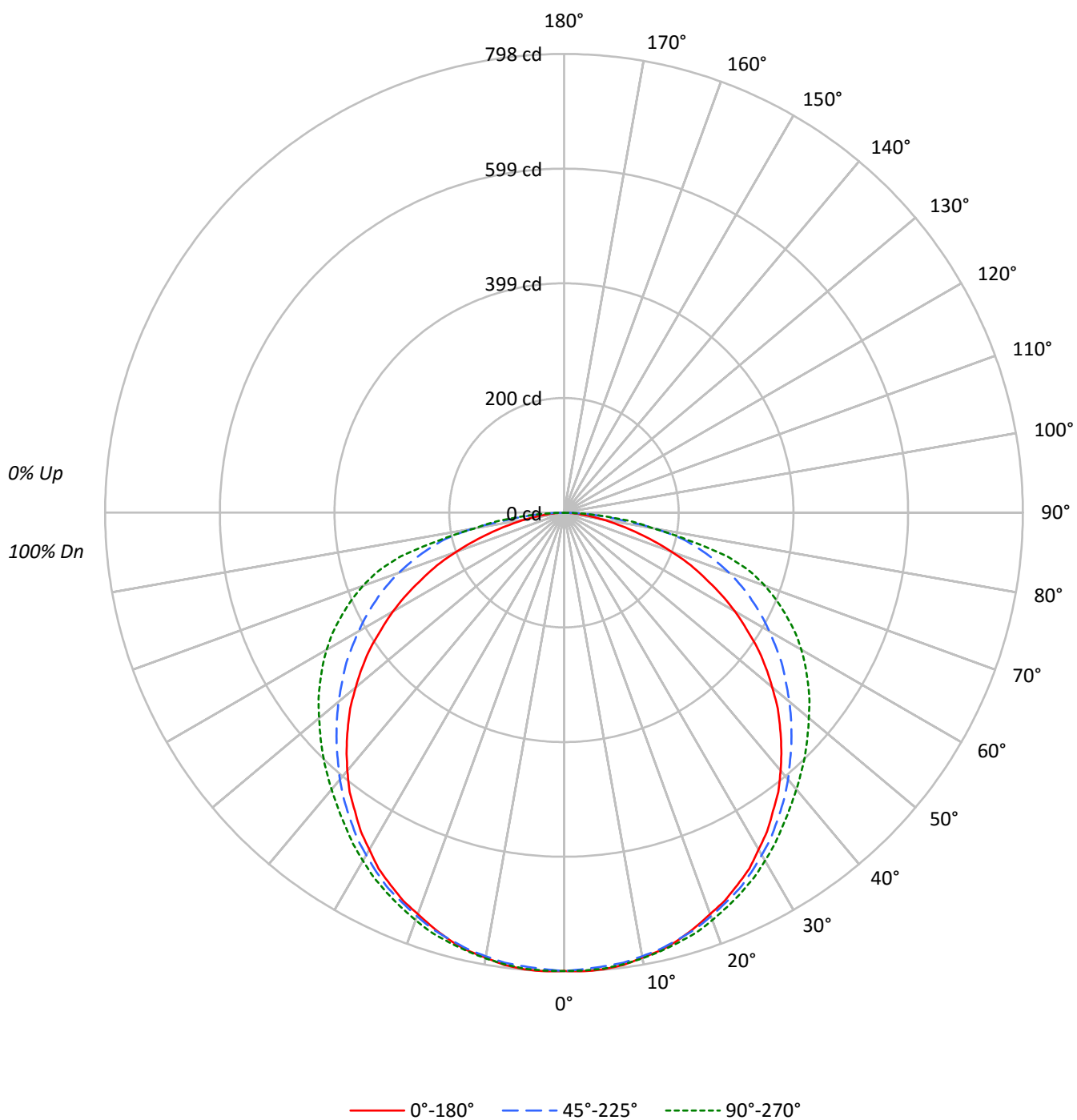
Input Watts (W): 31
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1073	1073	1073
5°	1077	1070	1075
10°	1074	1070	1075
15°	1072	1070	1077
20°	1064	1069	1080
25°	1060	1071	1083
30°	1051	1069	1086
35°	1041	1066	1090
40°	1029	1065	1104
45°	1012	1065	1129
50°	990	1071	1163
55°	965	1088	1215
60°	924	1110	1283
65°	865	1149	1361
70°	786	1202	1464
75°	667	1268	1529
80°	526	1276	1237
85°	387	971	1087



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.6	3.0
10°-20°	217.6	8.6
20°-30°	332.8	13.1
30°-40°	406.9	16.0
40°-50°	433.6	17.1
50°-60°	414.6	16.4
60°-70°	351.2	13.9
70°-80°	236.0	9.3
80°-90°	66.6	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°	626.1	24.7
0°-40°	1032.9	40.7
0°-60°	1881.2	74.2
0°-90°	2535.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2535.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	797	797	797	797	797	
5°	797	796	792	796	796	76
15°	770	770	768	775	773	217
25°	714	717	722	728	729	329
35°	634	639	649	661	664	397
45°	532	541	560	583	594	410
55°	411	426	464	500	518	366
65°	272	299	361	409	428	270
75°	128	175	244	285	294	137
85°	25	52	63	68	70	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	797.2	797.2	797.2	797.2	797.2
2.5°	798.4	798.4	794.7	797.2	797.2
5°	797.2	795.9	792.2	795.9	795.9
7.5°	793.4	792.2	789.6	793.4	792.2
10°	785.9	785.9	783.4	787.1	787.1
12.5°	779.6	778.3	777.1	782.1	780.8
15°	769.5	769.5	768.3	774.6	773.3
17.5°	756.9	758.2	759.5	764.5	765.8
20°	743.1	745.6	746.9	754.4	754.4
22.5°	730.5	731.8	734.3	741.9	741.9
25°	714.2	716.7	721.7	728.0	729.3
27.5°	697.9	699.1	705.4	714.2	715.5
30°	676.5	680.2	687.8	697.9	699.1
32.5°	657.6	661.4	670.2	680.2	682.8
35°	633.7	638.8	648.8	661.4	663.9
37.5°	612.3	616.1	628.7	642.5	646.3
40°	585.9	593.5	606.1	622.4	628.7
42.5°	559.5	567.1	582.2	603.5	611.1
45°	531.9	540.7	559.5	583.4	593.5
47.5°	504.2	514.3	535.6	563.3	574.6
50°	472.8	485.4	511.8	543.2	555.8
52.5°	442.6	457.7	486.6	521.8	538.2
55°	411.2	426.3	464.0	500.4	518.0
57.5°	376.0	396.1	437.6	479.1	497.9
60°	343.3	362.1	412.4	457.7	476.6
62.5°	308.1	333.2	387.3	435.1	453.9
65°	271.6	299.3	360.9	408.7	427.5
67.5°	238.9	269.1	334.5	382.2	401.1
70°	199.9	237.6	305.5	353.3	372.2
72.5°	163.5	205.0	275.4	321.9	339.5
75°	128.3	174.8	243.9	285.4	294.2
77.5°	95.6	144.6	211.2	228.8	222.6
80°	67.9	115.7	164.7	155.9	159.7
82.5°	44.0	88.0	101.8	115.7	119.5
85°	25.1	51.6	62.9	67.9	70.4
87.5°	11.3	18.9	25.1	25.1	23.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)