

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: P309471

Luminaire Tested: **24FCZ2-45-UNV-L82765-HRP-CA125-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: P309471
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-45-UNV-L82765-HRP-CA125-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC 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: 3265.0 lumens
Efficiency: N/A
Efficacy: 84.4 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

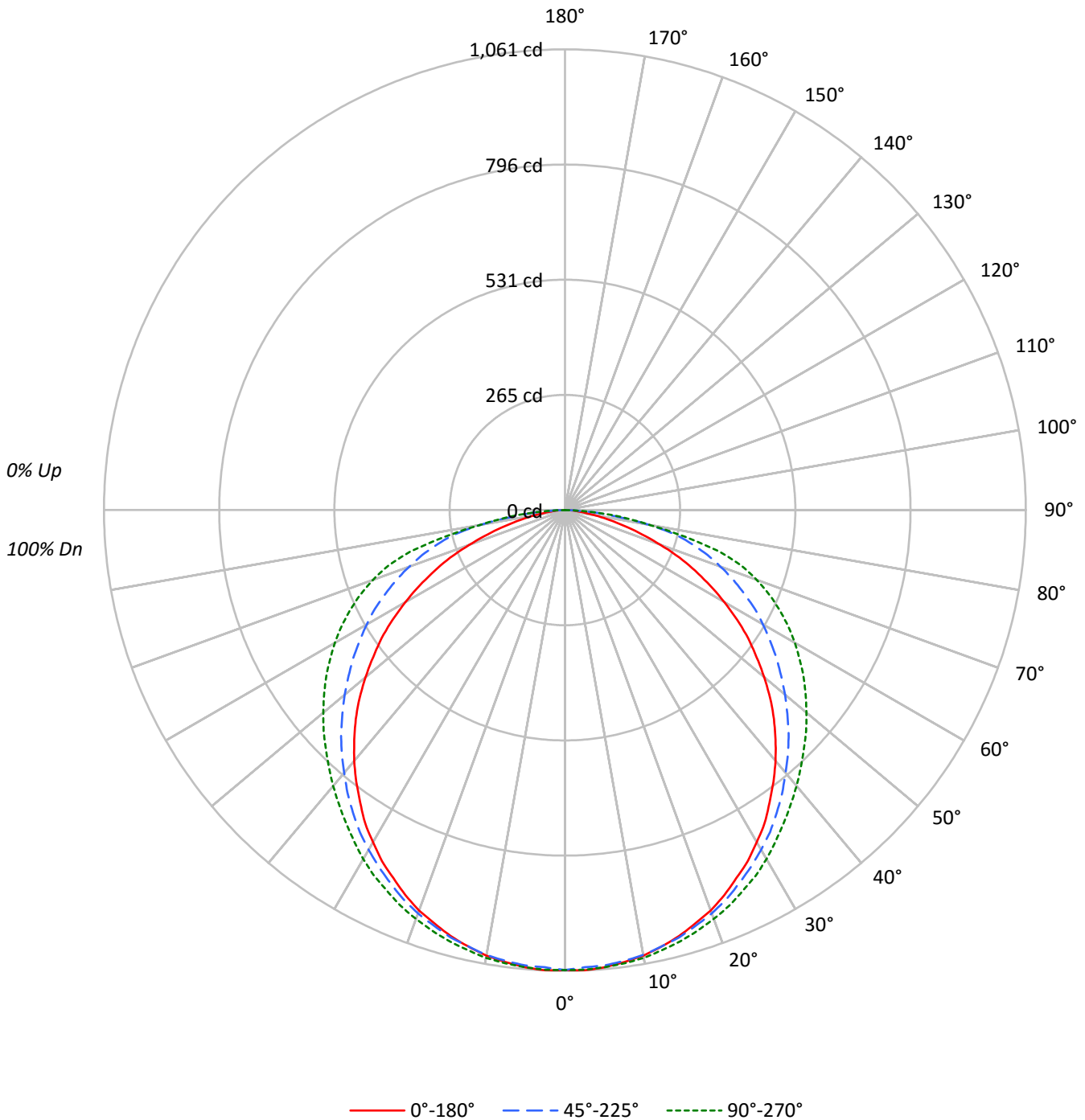
Input Watts (W): 38.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1425	1425	1425
5°	1427	1422	1427
10°	1423	1421	1430
15°	1415	1418	1432
20°	1405	1415	1435
25°	1388	1408	1437
30°	1372	1404	1442
35°	1349	1396	1444
40°	1325	1388	1457
45°	1295	1386	1480
50°	1253	1385	1519
55°	1209	1395	1574
60°	1140	1416	1644
65°	1053	1449	1736
70°	919	1500	1850
75°	746	1577	1912
80°	551	1547	1547
85°	421	1139	1288



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.4	3.1
10°-20°	288.2	8.8
20°-30°	438.7	13.4
30°-40°	532.7	16.3
40°-50°	562.8	17.2
50°-60°	531.0	16.3
60°-70°	441.5	13.5
70°-80°	290.5	8.9
80°-90°	79.2	2.4
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°	827.2	25.3
0°-40°	1359.9	41.7
0°-60°	2453.8	75.2
0°-90°	3265.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3265.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1059	1059	1059	1059	1059	
5°	1057	1057	1052	1057	1057	100
15°	1016	1017	1018	1028	1028	286
25°	935	940	949	965	968	431
35°	822	831	850	872	879	514
45°	681	694	728	764	778	524
55°	515	537	595	651	671	459
65°	331	369	455	522	545	327
75°	144	209	303	360	368	155
85°	27	60	74	82	83	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1059.3	1059.3	1059.3	1059.3	1059.3
2.5°	1060.7	1059.3	1053.9	1059.3	1059.3
5°	1056.6	1056.6	1052.5	1056.6	1056.6
7.5°	1049.8	1049.8	1047.0	1052.5	1052.5
10°	1041.6	1041.6	1040.2	1047.0	1047.0
12.5°	1029.3	1030.6	1029.3	1037.5	1037.5
15°	1015.6	1017.0	1018.3	1027.9	1027.9
17.5°	997.8	1000.6	1003.3	1014.2	1015.6
20°	981.4	982.8	988.3	1000.6	1001.9
22.5°	959.5	963.7	970.5	982.8	986.9
25°	934.9	940.4	948.6	965.0	967.8
27.5°	911.7	915.8	926.7	944.5	950.0
30°	883.0	889.8	903.5	921.3	928.1
32.5°	855.7	862.5	878.9	898.0	903.5
35°	821.5	831.1	850.2	872.1	878.9
37.5°	788.7	798.3	821.5	846.1	854.3
40°	754.5	765.5	790.1	818.8	829.7
42.5°	717.6	732.6	760.0	791.4	803.7
45°	680.7	694.4	728.5	764.1	777.8
47.5°	641.1	657.5	694.4	736.7	753.2
50°	598.7	619.2	661.6	708.0	725.8
52.5°	556.3	579.6	627.4	679.3	698.5
55°	515.3	537.2	594.6	650.6	671.1
57.5°	470.2	497.5	560.4	620.6	641.1
60°	423.7	453.8	526.2	589.1	611.0
62.5°	377.3	411.4	493.4	556.3	579.6
65°	330.8	369.1	455.2	522.1	545.4
67.5°	285.7	328.1	419.6	486.6	509.8
70°	233.7	287.0	381.4	447.0	470.2
72.5°	185.9	247.4	344.5	406.0	426.5
75°	143.5	209.1	303.4	359.5	367.7
77.5°	105.2	170.9	261.1	280.2	281.6
80°	71.1	136.7	199.6	196.8	199.6
82.5°	46.5	102.5	125.8	140.8	142.2
85°	27.3	60.1	73.8	82.0	83.4
87.5°	13.7	20.5	26.0	27.3	30.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)