

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: P309481

Luminaire Tested: **24FCZ2-45-UNV-L82765-HRP-CP125-W2A-U-6500K**

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: P309481
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-CP125-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125"
POLYCARB SHEET
Light Source: (168) 6500K 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: 3210.0 lumens
Efficiency: N/A
Efficacy: 81.7 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

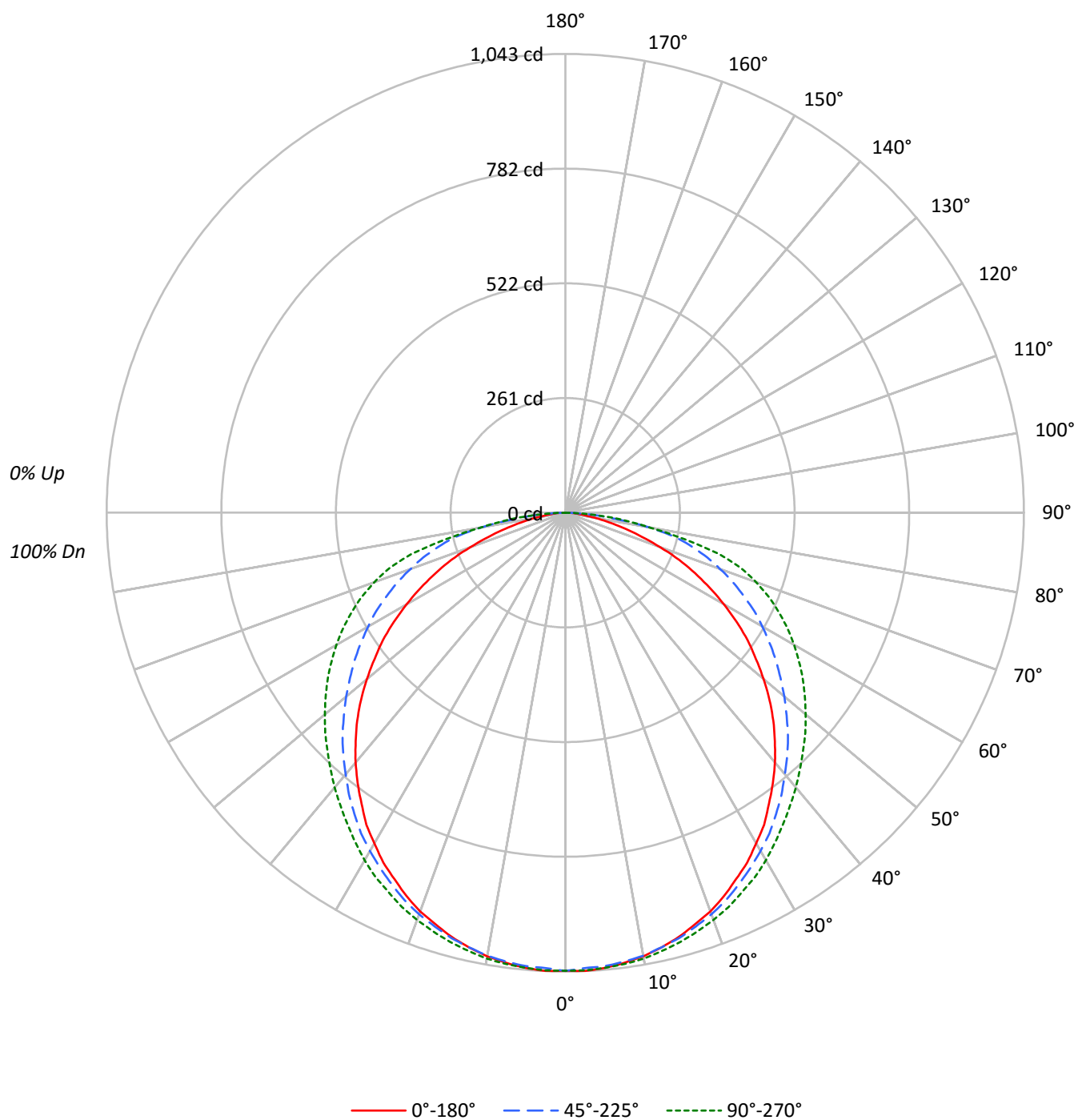
Input Watts (W): 39.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	50	30	10
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°	1401	1401	1401
5°	1403	1398	1403
10°	1399	1397	1406
15°	1391	1395	1408
20°	1382	1391	1410
25°	1365	1385	1412
30°	1349	1380	1418
35°	1327	1373	1419
40°	1303	1364	1433
45°	1273	1363	1455
50°	1232	1361	1494
55°	1188	1371	1548
60°	1121	1392	1616
65°	1035	1425	1707
70°	904	1475	1819
75°	734	1551	1879
80°	542	1520	1520
85°	415	1121	1266



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.7	3.1
10°-20°	283.3	8.8
20°-30°	431.3	13.4
30°-40°	523.7	16.3
40°-50°	553.3	17.2
50°-60°	522.1	16.3
60°-70°	434.1	13.5
70°-80°	285.6	8.9
80°-90°	77.9	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°	813.3	25.3
0°-40°	1337.0	41.7
0°-60°	2412.4	75.2
0°-90°	3210.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3210.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1042	1042	1042	1042	1042	
5°	1039	1039	1035	1039	1039	99
15°	998	1000	1001	1011	1011	282
25°	919	925	933	949	951	424
35°	808	817	836	857	864	506
45°	669	683	716	751	765	515
55°	507	528	585	640	660	451
65°	325	363	448	513	536	321
75°	141	206	298	353	362	152
85°	27	59	73	81	82	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1041.5	1041.5	1041.5	1041.5	1041.5
2.5°	1042.8	1041.5	1036.1	1041.5	1041.5
5°	1038.8	1038.8	1034.8	1038.8	1038.8
7.5°	1032.1	1032.1	1029.4	1034.8	1034.8
10°	1024.0	1024.0	1022.7	1029.4	1029.4
12.5°	1011.9	1013.3	1011.9	1020.0	1020.0
15°	998.5	999.8	1001.2	1010.6	1010.6
17.5°	981.0	983.7	986.4	997.1	998.5
20°	964.9	966.2	971.6	983.7	985.0
22.5°	943.4	947.4	954.1	966.2	970.3
25°	919.2	924.6	932.6	948.8	951.4
27.5°	896.4	900.4	911.1	928.6	934.0
30°	868.1	874.8	888.3	905.8	912.5
32.5°	841.3	848.0	864.1	882.9	888.3
35°	807.7	817.1	835.9	857.4	864.1
37.5°	775.4	784.8	807.7	831.8	839.9
40°	741.8	752.6	776.7	805.0	815.7
42.5°	705.5	720.3	747.2	778.1	790.2
45°	669.2	682.7	716.3	751.2	764.7
47.5°	630.3	646.4	682.7	724.3	740.5
50°	588.6	608.8	650.4	696.1	713.6
52.5°	546.9	569.8	616.8	667.9	686.7
55°	506.6	528.1	584.6	639.7	659.8
57.5°	462.3	489.2	551.0	610.1	630.3
60°	416.6	446.2	517.4	579.2	600.7
62.5°	370.9	404.5	485.1	546.9	569.8
65°	325.2	362.8	447.5	513.4	536.2
67.5°	280.9	322.5	412.6	478.4	501.3
70°	229.8	282.2	374.9	439.4	462.3
72.5°	182.8	243.2	338.7	399.1	419.3
75°	141.1	205.6	298.3	353.4	361.5
77.5°	103.5	168.0	256.7	275.5	276.8
80°	69.9	134.4	196.2	193.5	196.2
82.5°	45.7	100.8	123.6	138.4	139.8
85°	26.9	59.1	72.6	80.6	82.0
87.5°	13.4	20.2	25.5	26.9	29.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)