

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: P309585

Luminaire Tested: **24FCZ2-50-UNV-L82765-HRP-CP250-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: P309585
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: 24FCZ2-50-UNV-L82765-HRP-CP250-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 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: 3270.0 lumens
Efficiency: N/A
Efficacy: 75.2 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

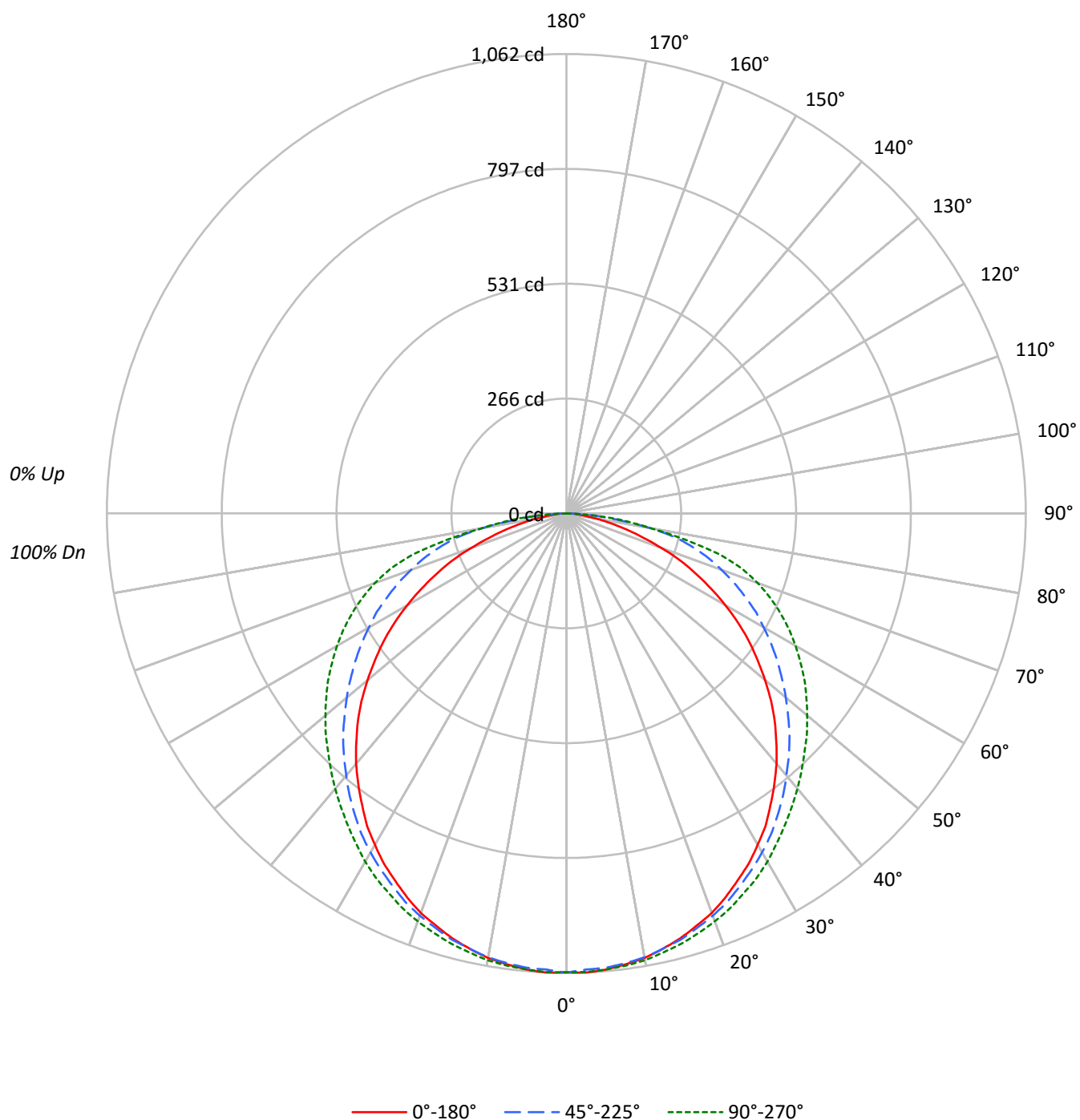
Input Watts (W): 43.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1428	1428	1428
5°	1429	1424	1429
10°	1425	1423	1433
15°	1417	1421	1434
20°	1407	1417	1437
25°	1390	1411	1439
30°	1374	1406	1444
35°	1351	1399	1446
40°	1327	1390	1460
45°	1297	1388	1482
50°	1255	1387	1522
55°	1211	1397	1577
60°	1142	1418	1647
65°	1055	1451	1739
70°	921	1502	1852
75°	747	1580	1915
80°	552	1549	1549
85°	423	1141	1289



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.5	3.1
10°-20°	288.6	8.8
20°-30°	439.4	13.4
30°-40°	533.5	16.3
40°-50°	563.6	17.2
50°-60°	531.9	16.3
60°-70°	442.2	13.5
70°-80°	290.9	8.9
80°-90°	79.3	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°	828.5	25.3
0°-40°	1362.0	41.7
0°-60°	2457.5	75.2
0°-90°	3270.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3270.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1061	1061	1061	1061	1061	
5°	1058	1058	1054	1058	1058	101
15°	1017	1018	1020	1030	1030	287
25°	936	942	950	966	969	432
35°	823	832	852	873	880	515
45°	682	695	730	765	779	525
55°	516	538	596	652	672	460
65°	331	370	456	523	546	327
75°	144	210	304	360	368	155
85°	27	60	74	82	84	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1061.0	1061.0	1061.0	1061.0	1061.0
2.5°	1062.3	1061.0	1055.5	1061.0	1061.0
5°	1058.2	1058.2	1054.1	1058.2	1058.2
7.5°	1051.4	1051.4	1048.6	1054.1	1054.1
10°	1043.2	1043.2	1041.8	1048.6	1048.6
12.5°	1030.8	1032.2	1030.8	1039.1	1039.1
15°	1017.1	1018.5	1019.9	1029.5	1029.5
17.5°	999.4	1002.1	1004.8	1015.8	1017.1
20°	982.9	984.3	989.8	1002.1	1003.5
22.5°	961.0	965.1	972.0	984.3	988.4
25°	936.4	941.9	950.1	966.5	969.2
27.5°	913.1	917.2	928.2	946.0	951.4
30°	884.4	891.2	904.9	922.7	929.5
32.5°	857.0	863.8	880.2	899.4	904.9
35°	822.8	832.3	851.5	873.4	880.2
37.5°	789.9	799.5	822.8	847.4	855.6
40°	755.7	766.6	791.3	820.0	831.0
42.5°	718.7	733.8	761.1	792.6	805.0
45°	681.7	695.4	729.7	765.3	778.9
47.5°	642.0	658.5	695.4	737.9	754.3
50°	599.6	620.1	662.6	709.1	726.9
52.5°	557.2	580.4	628.4	680.4	699.5
55°	516.1	538.0	595.5	651.6	672.2
57.5°	470.9	498.3	561.3	621.5	642.0
60°	424.4	454.5	527.1	590.0	611.9
62.5°	377.8	412.1	494.2	557.2	580.4
65°	331.3	369.6	455.9	522.9	546.2
67.5°	286.1	328.6	420.3	487.4	510.6
70°	234.1	287.5	381.9	447.7	470.9
72.5°	186.2	247.8	345.0	406.6	427.1
75°	143.7	209.5	303.9	360.0	368.3
77.5°	105.4	171.1	261.5	280.6	282.0
80°	71.2	136.9	199.9	197.1	199.9
82.5°	46.5	102.7	125.9	141.0	142.4
85°	27.4	60.2	73.9	82.1	83.5
87.5°	13.7	20.5	26.0	27.4	30.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)