

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: P309533

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-HRP-CP187-W2A-U-5500K**

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: P309533
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: 24FCZ2-50HE-UNV-L82765-HRP-CP187-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (336) 5500K 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: 3392.0 lumens
Efficiency: N/A
Efficacy: 85.9 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

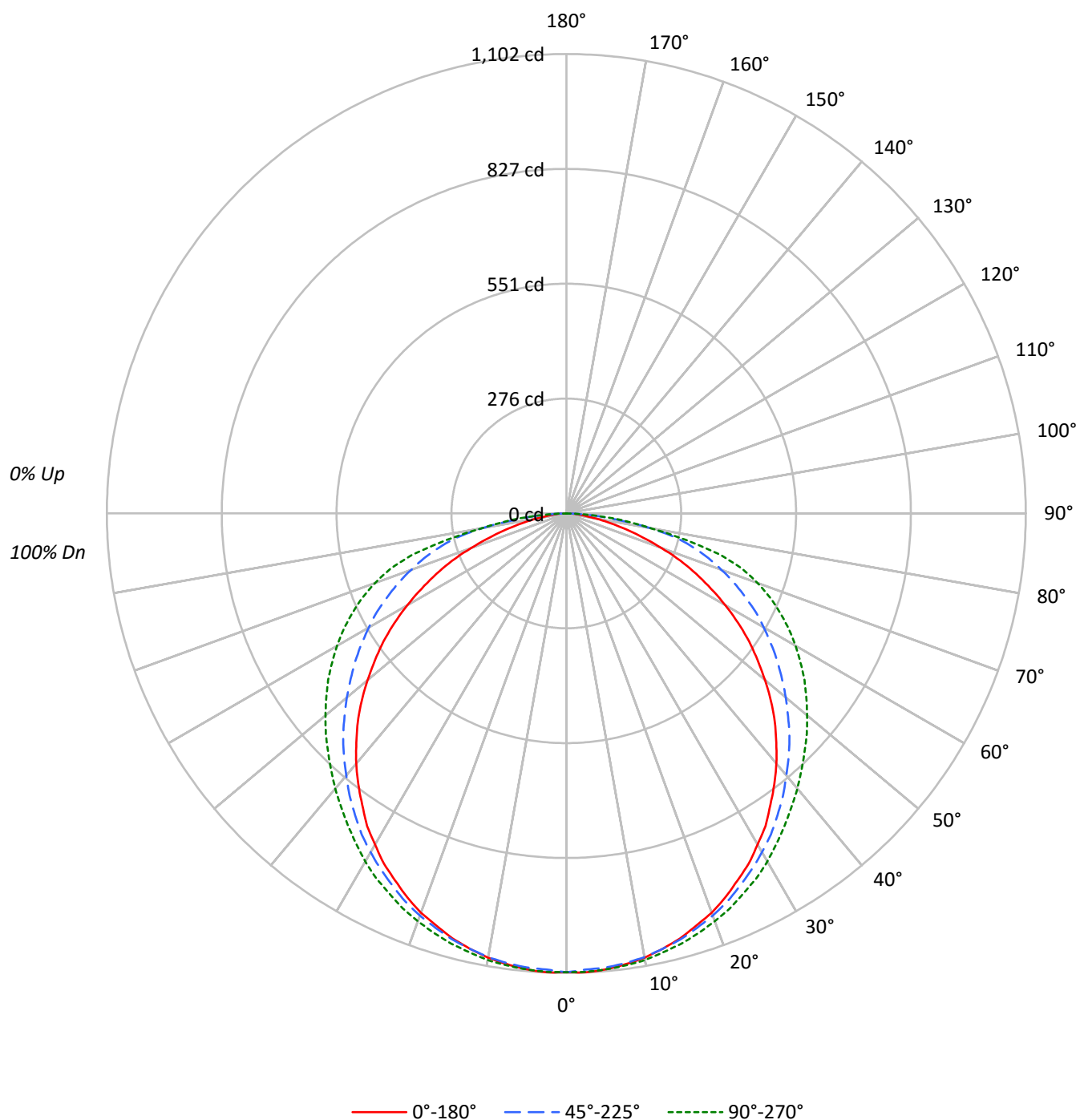
Input Watts (W): 39.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1481	1481	1481
5°	1483	1477	1483
10°	1478	1477	1486
15°	1470	1474	1488
20°	1460	1470	1490
25°	1442	1463	1493
30°	1425	1458	1498
35°	1402	1451	1500
40°	1377	1442	1514
45°	1346	1440	1537
50°	1302	1439	1578
55°	1256	1449	1635
60°	1185	1471	1708
65°	1094	1506	1804
70°	955	1559	1922
75°	775	1639	1986
80°	572	1606	1606
85°	438	1184	1337



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.3	3.1
10°-20°	299.4	8.8
20°-30°	455.8	13.4
30°-40°	553.4	16.3
40°-50°	584.7	17.2
50°-60°	551.7	16.3
60°-70°	458.7	13.5
70°-80°	301.8	8.9
80°-90°	82.3	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°	859.4	25.3
0°-40°	1412.8	41.7
0°-60°	2549.2	75.2
0°-90°	3392.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3392.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1100	1100	1100	1100	1100	
5°	1098	1098	1093	1098	1098	104
15°	1055	1056	1058	1068	1068	298
25°	971	977	986	1003	1005	448
35°	853	863	883	906	913	534
45°	707	721	757	794	808	545
55°	535	558	618	676	697	477
65°	344	383	473	542	567	340
75°	149	217	315	374	382	161
85°	28	62	77	85	87	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1100.5	1100.5	1100.5	1100.5	1100.5
2.5°	1102.0	1100.5	1094.9	1100.5	1100.5
5°	1097.7	1097.7	1093.4	1097.7	1097.7
7.5°	1090.6	1090.6	1087.8	1093.4	1093.4
10°	1082.1	1082.1	1080.7	1087.8	1087.8
12.5°	1069.3	1070.7	1069.3	1077.8	1077.8
15°	1055.1	1056.5	1057.9	1067.9	1067.9
17.5°	1036.6	1039.5	1042.3	1053.7	1055.1
20°	1019.6	1021.0	1026.7	1039.5	1040.9
22.5°	996.9	1001.1	1008.2	1021.0	1025.3
25°	971.3	977.0	985.5	1002.6	1005.4
27.5°	947.2	951.4	962.8	981.3	986.9
30°	917.4	924.5	938.7	957.1	964.2
32.5°	888.9	896.1	913.1	933.0	938.7
35°	853.4	863.4	883.3	906.0	913.1
37.5°	819.4	829.3	853.4	879.0	887.5
40°	783.9	795.2	820.8	850.6	862.0
42.5°	745.5	761.1	789.5	822.2	835.0
45°	707.2	721.4	756.9	793.8	808.0
47.5°	666.0	683.0	721.4	765.4	782.4
50°	622.0	643.3	687.3	735.6	754.0
52.5°	578.0	602.1	651.8	705.8	725.6
55°	535.4	558.1	617.7	675.9	697.2
57.5°	488.5	516.9	582.2	644.7	666.0
60°	440.2	471.5	546.7	612.0	634.8
62.5°	391.9	427.4	512.6	578.0	602.1
65°	343.7	383.4	472.9	542.5	566.6
67.5°	296.8	340.8	436.0	505.5	529.7
70°	242.8	298.2	396.2	464.4	488.5
72.5°	193.1	257.0	357.9	421.8	443.1
75°	149.1	217.3	315.3	373.5	382.0
77.5°	109.3	177.5	271.2	291.1	292.5
80°	73.8	142.0	207.3	204.5	207.3
82.5°	48.3	106.5	130.6	146.3	147.7
85°	28.4	62.5	76.7	85.2	86.6
87.5°	14.2	21.3	27.0	28.4	31.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)