

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: P309540

Luminaire Tested: **24FCZ2-50HE-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: P309540
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-CP250-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB 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: 3287.0 lumens
Efficiency: N/A
Efficacy: 84.1 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

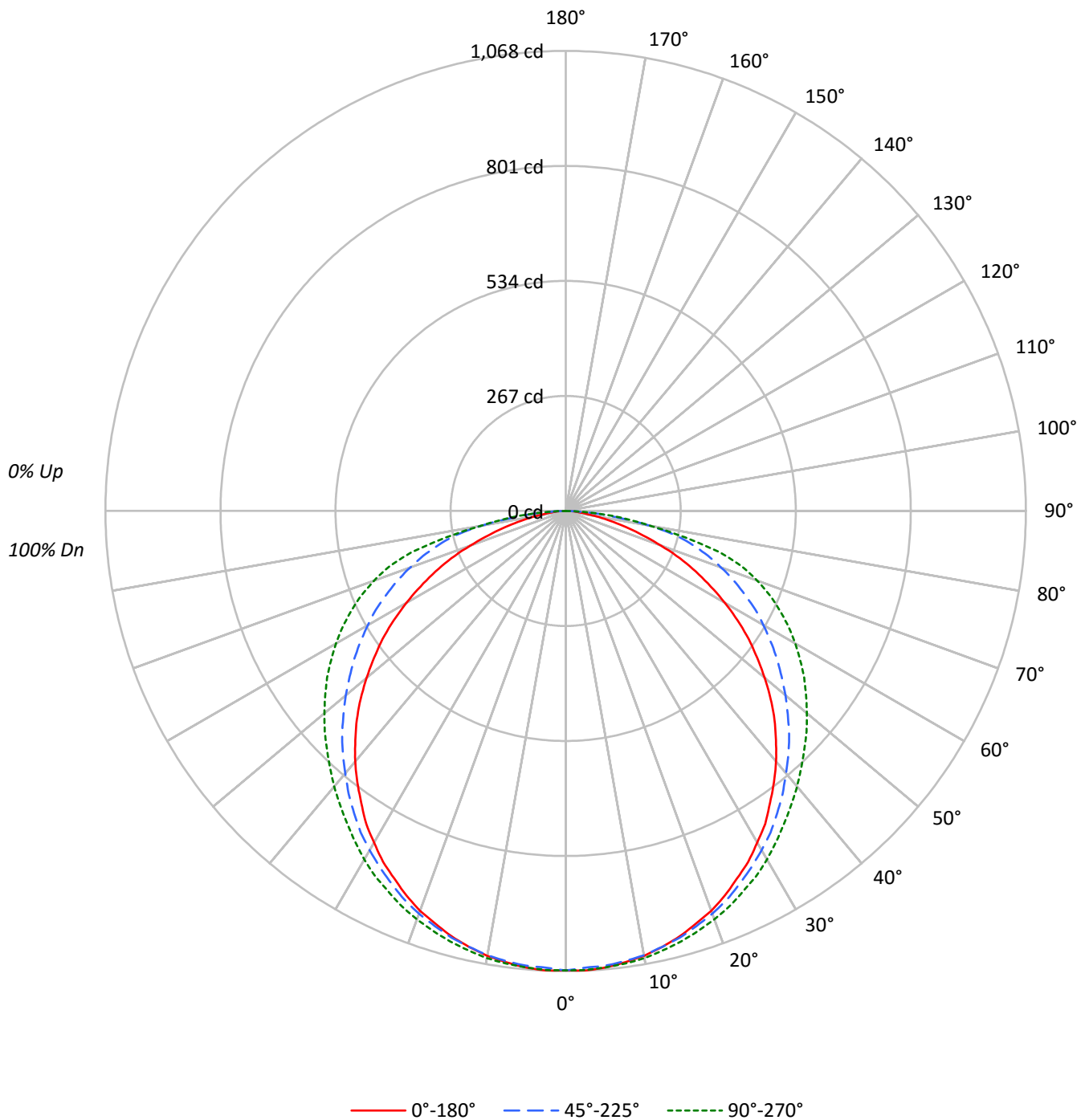
Input Watts (W): 39.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1435	1435	1435
5°	1437	1431	1437
10°	1433	1431	1440
15°	1424	1428	1441
20°	1415	1425	1444
25°	1397	1418	1446
30°	1381	1413	1452
35°	1358	1406	1453
40°	1334	1397	1467
45°	1304	1396	1490
50°	1262	1394	1530
55°	1217	1404	1585
60°	1148	1426	1655
65°	1060	1459	1748
70°	926	1510	1862
75°	751	1588	1925
80°	555	1557	1557
85°	425	1147	1295



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.0	3.1
10°-20°	290.1	8.8
20°-30°	441.7	13.4
30°-40°	536.3	16.3
40°-50°	566.6	17.2
50°-60°	534.6	16.3
60°-70°	444.5	13.5
70°-80°	292.5	8.9
80°-90°	79.7	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°	832.8	25.3
0°-40°	1369.1	41.7
0°-60°	2470.3	75.2
0°-90°	3287.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3287.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1066	1066	1066	1066	1066	
5°	1064	1064	1060	1064	1064	101
15°	1022	1024	1025	1035	1035	288
25°	941	947	955	972	974	434
35°	827	837	856	878	885	518
45°	685	699	734	769	783	528
55°	519	541	599	655	676	462
65°	333	372	458	526	549	329
75°	144	210	306	362	370	156
85°	28	60	74	83	84	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1066.5	1066.5	1066.5	1066.5	1066.5
2.5°	1067.8	1066.5	1061.0	1066.5	1066.5
5°	1063.7	1063.7	1059.6	1063.7	1063.7
7.5°	1056.8	1056.8	1054.1	1059.6	1059.6
10°	1048.6	1048.6	1047.2	1054.1	1054.1
12.5°	1036.2	1037.6	1036.2	1044.5	1044.5
15°	1022.4	1023.8	1025.2	1034.8	1034.8
17.5°	1004.5	1007.3	1010.1	1021.1	1022.4
20°	988.0	989.4	994.9	1007.3	1008.7
22.5°	966.0	970.1	977.0	989.4	993.5
25°	941.2	946.7	955.0	971.5	974.3
27.5°	917.9	922.0	933.0	950.9	956.4
30°	889.0	895.8	909.6	927.5	934.4
32.5°	861.4	868.3	884.8	904.1	909.6
35°	827.0	836.7	855.9	877.9	884.8
37.5°	794.0	803.6	827.0	851.8	860.1
40°	759.6	770.6	795.4	824.3	835.3
42.5°	722.4	737.6	765.1	796.8	809.1
45°	685.3	699.1	733.5	769.2	783.0
47.5°	645.4	661.9	699.1	741.7	758.2
50°	602.7	623.4	666.0	712.8	730.7
52.5°	560.1	583.5	631.6	683.9	703.2
55°	518.8	540.8	598.6	655.0	675.7
57.5°	473.4	500.9	564.2	624.7	645.4
60°	426.6	456.9	529.8	593.1	615.1
62.5°	379.8	414.2	496.8	560.1	583.5
65°	333.0	371.5	458.2	525.7	549.1
67.5°	287.6	330.3	422.5	489.9	513.3
70°	235.3	289.0	383.9	450.0	473.4
72.5°	187.1	249.1	346.8	408.7	429.3
75°	144.5	210.5	305.5	361.9	370.2
77.5°	106.0	172.0	262.8	282.1	283.5
80°	71.6	137.6	200.9	198.2	200.9
82.5°	46.8	103.2	126.6	141.7	143.1
85°	27.5	60.5	74.3	82.6	83.9
87.5°	13.8	20.6	26.1	27.5	30.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)