

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: P309539

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-HRP-CP250-W2A-U-4000K**

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: P309539
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-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (336) 4000K 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: 3229.0 lumens
Efficiency: N/A
Efficacy: 83.2 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

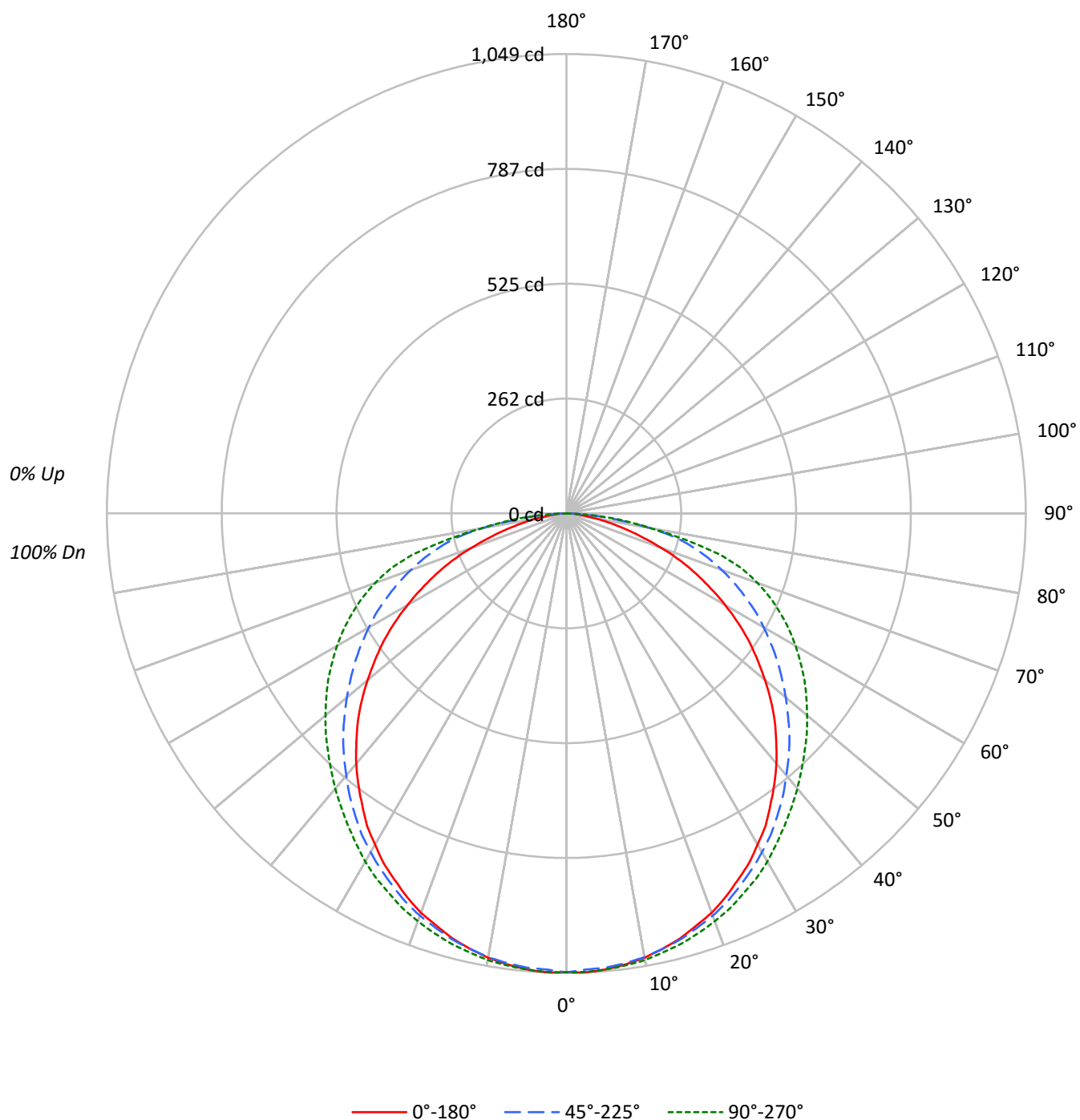
Input Watts (W): 38.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1410	1410	1410
5°	1411	1406	1411
10°	1407	1405	1415
15°	1399	1403	1416
20°	1390	1399	1419
25°	1373	1393	1421
30°	1357	1388	1426
35°	1334	1381	1428
40°	1311	1372	1441
45°	1281	1371	1464
50°	1239	1370	1503
55°	1195	1379	1557
60°	1128	1400	1626
65°	1041	1433	1717
70°	910	1484	1829
75°	738	1560	1890
80°	545	1530	1530
85°	417	1127	1274



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.2	3.1
10°-20°	285.0	8.8
20°-30°	433.9	13.4
30°-40°	526.8	16.3
40°-50°	556.6	17.2
50°-60°	525.2	16.3
60°-70°	436.7	13.5
70°-80°	287.3	8.9
80°-90°	78.3	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°	818.1	25.3
0°-40°	1344.9	41.7
0°-60°	2426.7	75.2
0°-90°	3229.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3229.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1048	1048	1048	1048	1048	
5°	1045	1045	1041	1045	1045	99
15°	1004	1006	1007	1017	1017	283
25°	925	930	938	954	957	427
35°	812	822	841	862	869	509
45°	673	687	720	756	769	518
55°	510	531	588	644	664	454
65°	327	365	450	516	539	323
75°	142	207	300	356	364	153
85°	27	60	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°	1047.7	1047.7	1047.7	1047.7	1047.7
2.5°	1049.0	1047.7	1042.2	1047.7	1047.7
5°	1044.9	1044.9	1040.9	1044.9	1044.9
7.5°	1038.2	1038.2	1035.5	1040.9	1040.9
10°	1030.1	1030.1	1028.7	1035.5	1035.5
12.5°	1017.9	1019.3	1017.9	1026.0	1026.0
15°	1004.4	1005.7	1007.1	1016.6	1016.6
17.5°	986.8	989.5	992.2	1003.0	1004.4
20°	970.6	972.0	977.4	989.5	990.9
22.5°	949.0	953.0	959.8	972.0	976.0
25°	924.6	930.0	938.2	954.4	957.1
27.5°	901.7	905.7	916.5	934.1	939.5
30°	873.3	880.0	893.5	911.1	917.9
32.5°	846.2	853.0	869.2	888.1	893.5
35°	812.4	821.9	840.8	862.5	869.2
37.5°	780.0	789.5	812.4	836.8	844.9
40°	746.2	757.0	781.3	809.7	820.5
42.5°	709.7	724.6	751.6	782.7	794.9
45°	673.2	686.7	720.5	755.7	769.2
47.5°	634.0	650.2	686.7	728.6	744.8
50°	592.1	612.4	654.3	700.2	717.8
52.5°	550.2	573.2	620.5	671.8	690.8
55°	509.6	531.3	588.0	643.5	663.7
57.5°	465.0	492.1	554.2	613.7	634.0
60°	419.1	448.8	520.4	582.6	604.3
62.5°	373.1	406.9	488.0	550.2	573.2
65°	327.1	365.0	450.2	516.4	539.4
67.5°	282.5	324.4	415.0	481.2	504.2
70°	231.2	283.9	377.2	442.0	465.0
72.5°	183.8	244.7	340.7	401.5	421.8
75°	141.9	206.8	300.1	355.5	363.6
77.5°	104.1	169.0	258.2	277.1	278.5
80°	70.3	135.2	197.4	194.7	197.4
82.5°	46.0	101.4	124.4	139.2	140.6
85°	27.0	59.5	73.0	81.1	82.5
87.5°	13.5	20.3	25.7	27.0	29.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)