

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: P309530

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-HRP-CP187-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: P309530
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-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
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: 3256.0 lumens
Efficiency: N/A
Efficacy: 83.9 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

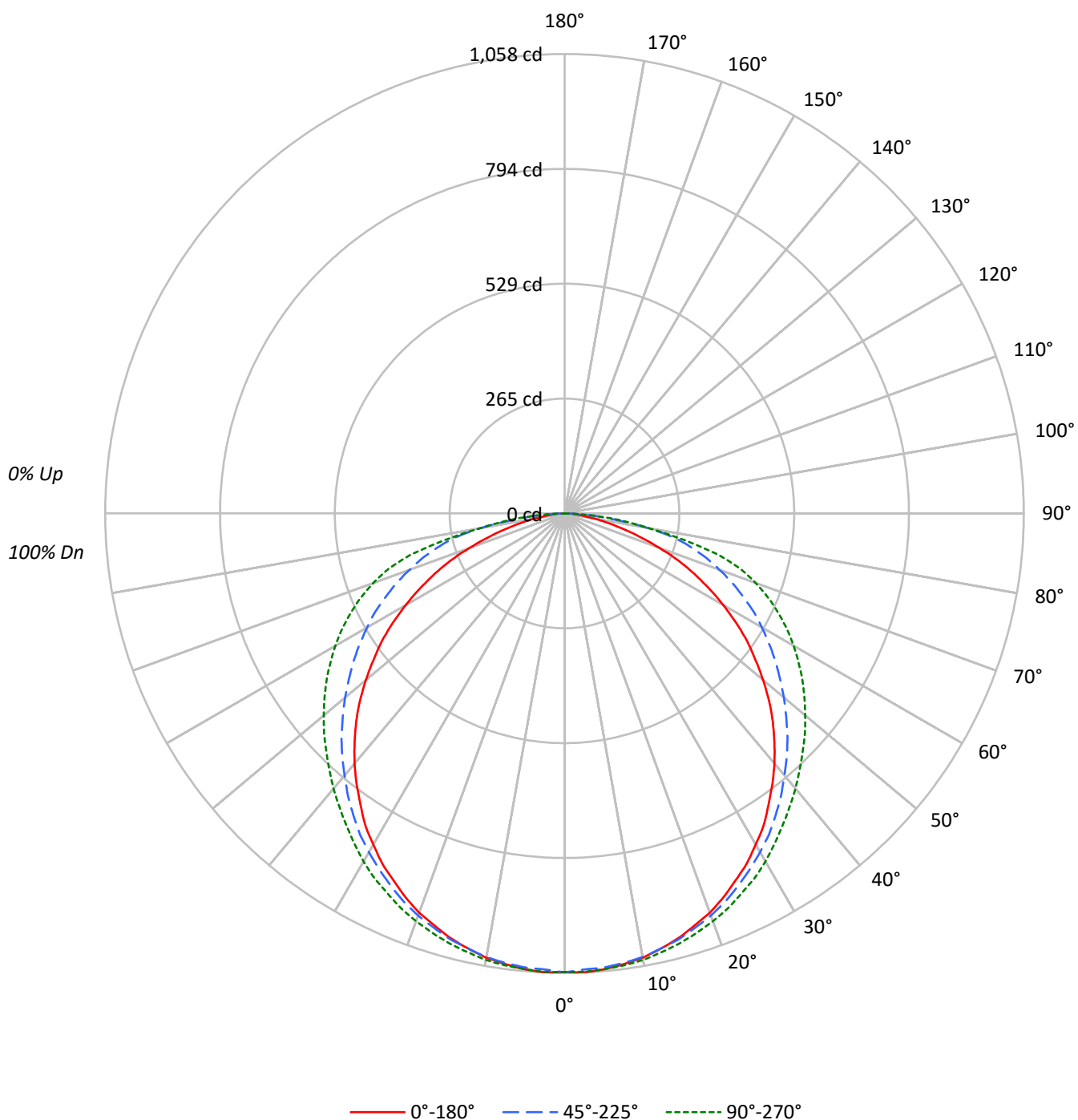
Input Watts (W): 38.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1421	1421	1421
5°	1423	1418	1423
10°	1419	1417	1426
15°	1411	1415	1428
20°	1401	1411	1431
25°	1384	1404	1433
30°	1368	1400	1438
35°	1346	1393	1440
40°	1322	1384	1453
45°	1292	1382	1476
50°	1250	1381	1515
55°	1206	1391	1570
60°	1137	1412	1640
65°	1050	1445	1732
70°	917	1496	1845
75°	744	1573	1906
80°	549	1542	1542
85°	421	1136	1283



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.1	3.1
10°-20°	287.4	8.8
20°-30°	437.5	13.4
30°-40°	531.2	16.3
40°-50°	561.2	17.2
50°-60°	529.6	16.3
60°-70°	440.3	13.5
70°-80°	289.7	8.9
80°-90°	79.0	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°	825.0	25.3
0°-40°	1356.2	41.7
0°-60°	2447.0	75.2
0°-90°	3256.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3256.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1056	1056	1056	1056	1056	
5°	1054	1054	1050	1054	1054	100
15°	1013	1014	1016	1025	1025	286
25°	932	938	946	962	965	430
35°	819	829	848	870	876	513
45°	679	692	726	762	776	523
55°	514	536	593	649	669	458
65°	330	368	454	521	544	326
75°	143	209	303	358	367	154
85°	27	60	74	82	83	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1056.4	1056.4	1056.4	1056.4	1056.4
2.5°	1057.8	1056.4	1051.0	1056.4	1056.4
5°	1053.7	1053.7	1049.6	1053.7	1053.7
7.5°	1046.9	1046.9	1044.1	1049.6	1049.6
10°	1038.7	1038.7	1037.3	1044.1	1044.1
12.5°	1026.4	1027.8	1026.4	1034.6	1034.6
15°	1012.8	1014.2	1015.5	1025.1	1025.1
17.5°	995.1	997.8	1000.5	1011.4	1012.8
20°	978.7	980.1	985.5	997.8	999.2
22.5°	956.9	961.0	967.8	980.1	984.2
25°	932.4	937.8	946.0	962.4	965.1
27.5°	909.2	913.3	924.2	941.9	947.4
30°	880.6	887.4	901.0	918.7	925.6
32.5°	853.3	860.1	876.5	895.6	901.0
35°	819.2	828.8	847.9	869.7	876.5
37.5°	786.5	796.1	819.2	843.8	851.9
40°	752.4	763.3	787.9	816.5	827.4
42.5°	715.6	730.6	757.9	789.2	801.5
45°	678.8	692.5	726.5	762.0	775.6
47.5°	639.3	655.7	692.5	734.7	751.1
50°	597.0	617.5	659.7	706.1	723.8
52.5°	554.8	578.0	625.7	677.5	696.6
55°	513.9	535.7	593.0	648.8	669.3
57.5°	468.9	496.2	558.9	618.9	639.3
60°	422.6	452.6	524.8	587.5	609.3
62.5°	376.2	410.3	492.1	554.8	578.0
65°	329.9	368.0	453.9	520.7	543.9
67.5°	284.9	327.1	418.5	485.3	508.4
70°	233.1	286.3	380.3	445.7	468.9
72.5°	185.4	246.7	343.5	404.8	425.3
75°	143.1	208.6	302.6	358.5	366.7
77.5°	105.0	170.4	260.4	279.4	280.8
80°	70.9	136.3	199.0	196.3	199.0
82.5°	46.3	102.2	125.4	140.4	141.8
85°	27.3	60.0	73.6	81.8	83.1
87.5°	13.6	20.4	25.9	27.3	30.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)