

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: P313682

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-RDP-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: P313682
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-55HE-UNV-L83050-RDP-CP187-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 3353.0 lumens
Efficiency: N/A
Efficacy: 76.0 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

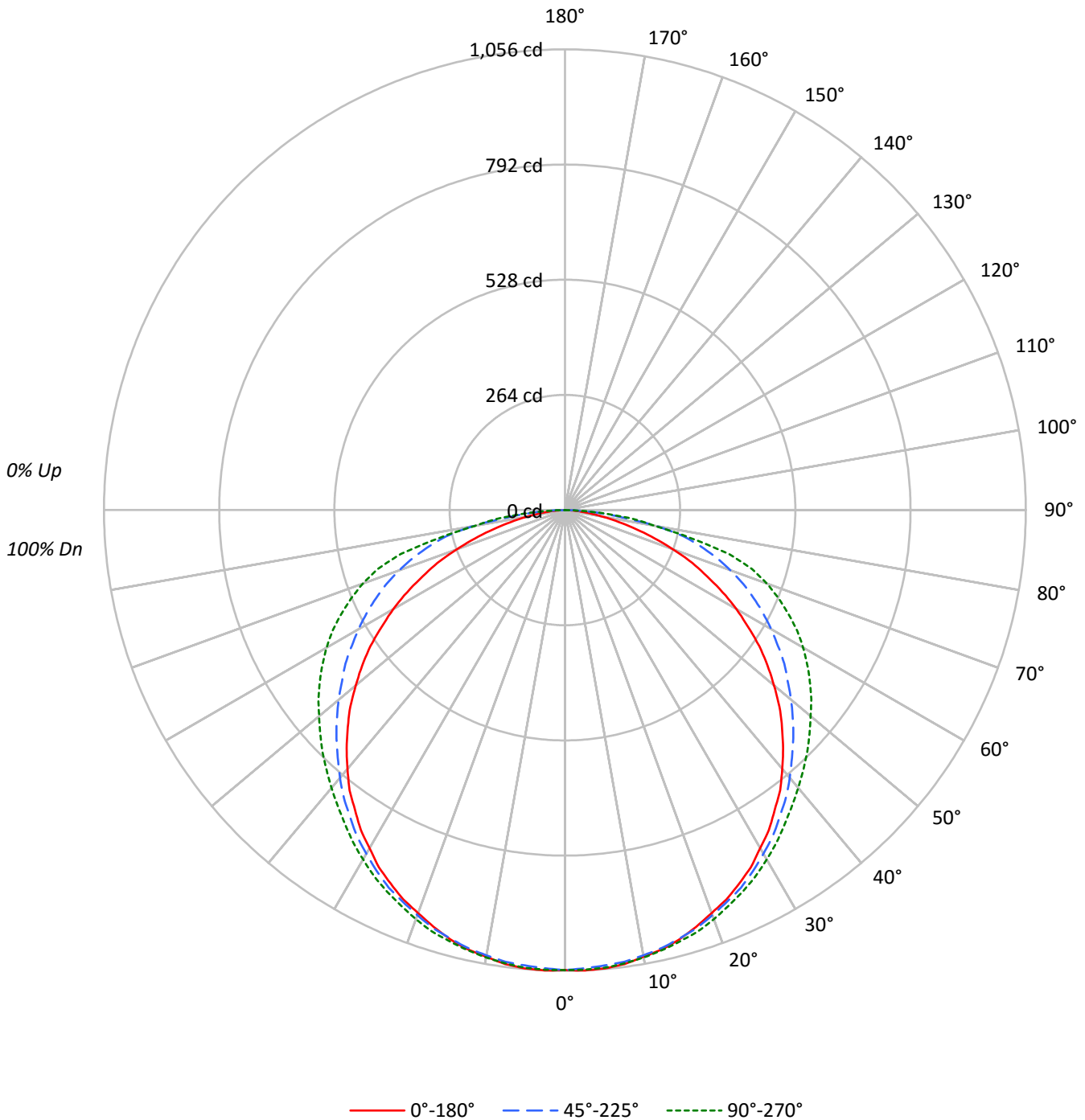
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				10	0
RW	70	50	30	10	70	50	30	10	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	102	102	102	100
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1419	1419	1419
5°	1424	1415	1422
10°	1420	1416	1422
15°	1418	1416	1425
20°	1407	1415	1429
25°	1402	1417	1432
30°	1390	1413	1437
35°	1377	1410	1442
40°	1361	1408	1461
45°	1339	1408	1494
50°	1309	1417	1539
55°	1276	1440	1607
60°	1222	1468	1696
65°	1144	1520	1800
70°	1040	1590	1937
75°	882	1677	2023
80°	696	1688	1636
85°	514	1284	1437



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.0	3.0
10°-20°	287.9	8.6
20°-30°	440.2	13.1
30°-40°	538.1	16.0
40°-50°	573.5	17.1
50°-60°	548.4	16.4
60°-70°	464.5	13.9
70°-80°	312.2	9.3
80°-90°	88.1	2.6
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°	828.1	24.7
0°-40°	1366.2	40.7
0°-60°	2488.2	74.2
0°-90°	3353.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3353.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1054	1054	1054	1054	1054	
5°	1054	1053	1048	1053	1053	100
15°	1018	1018	1016	1024	1023	287
25°	945	948	955	963	965	435
35°	838	845	858	875	878	525
45°	704	715	740	772	785	543
55°	544	564	614	662	685	484
65°	359	396	477	540	566	357
75°	170	231	323	378	389	182
85°	33	68	83	90	93	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1054.4	1054.4	1054.4	1054.4	1054.4
2.5°	1056.1	1056.1	1051.1	1054.4	1054.4
5°	1054.4	1052.8	1047.8	1052.8	1052.8
7.5°	1049.4	1047.8	1044.4	1049.4	1047.8
10°	1039.5	1039.5	1036.1	1041.1	1041.1
12.5°	1031.1	1029.5	1027.8	1034.5	1032.8
15°	1017.8	1017.8	1016.2	1024.5	1022.8
17.5°	1001.2	1002.9	1004.5	1011.2	1012.8
20°	982.9	986.2	987.9	997.9	997.9
22.5°	966.3	967.9	971.3	981.2	981.2
25°	944.7	948.0	954.6	963.0	964.6
27.5°	923.0	924.7	933.0	944.7	946.3
30°	894.8	899.8	909.7	923.0	924.7
32.5°	869.8	874.8	886.4	899.8	903.1
35°	838.2	844.9	858.2	874.8	878.1
37.5°	809.9	814.9	831.6	849.9	854.8
40°	775.0	785.0	801.6	823.2	831.6
42.5°	740.1	750.1	770.0	798.3	808.3
45°	703.5	715.1	740.1	771.7	785.0
47.5°	666.9	680.2	708.5	745.1	760.0
50°	625.3	642.0	676.9	718.5	735.1
52.5°	585.4	605.4	643.6	690.2	711.8
55°	543.8	563.8	613.7	661.9	685.2
57.5°	497.3	523.9	578.8	633.7	658.6
60°	454.0	479.0	545.5	605.4	630.3
62.5°	407.5	440.7	512.2	575.4	600.4
65°	359.2	395.8	477.3	540.5	565.5
67.5°	316.0	355.9	442.4	505.6	530.5
70°	264.4	314.3	404.1	467.3	492.3
72.5°	216.2	271.1	364.2	425.8	449.0
75°	169.6	231.2	322.6	377.5	389.2
77.5°	126.4	191.3	279.4	302.7	294.4
80°	89.8	153.0	217.9	206.2	211.2
82.5°	58.2	116.4	134.7	153.0	158.0
85°	33.3	68.2	83.2	89.8	93.1
87.5°	15.0	24.9	33.3	33.3	31.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)