

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: P310268

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-RDP-CA08-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: P310268
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-L82765-RDP-CA08-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC 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: 3407.0 lumens
Efficiency: N/A
Efficacy: 78.1 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

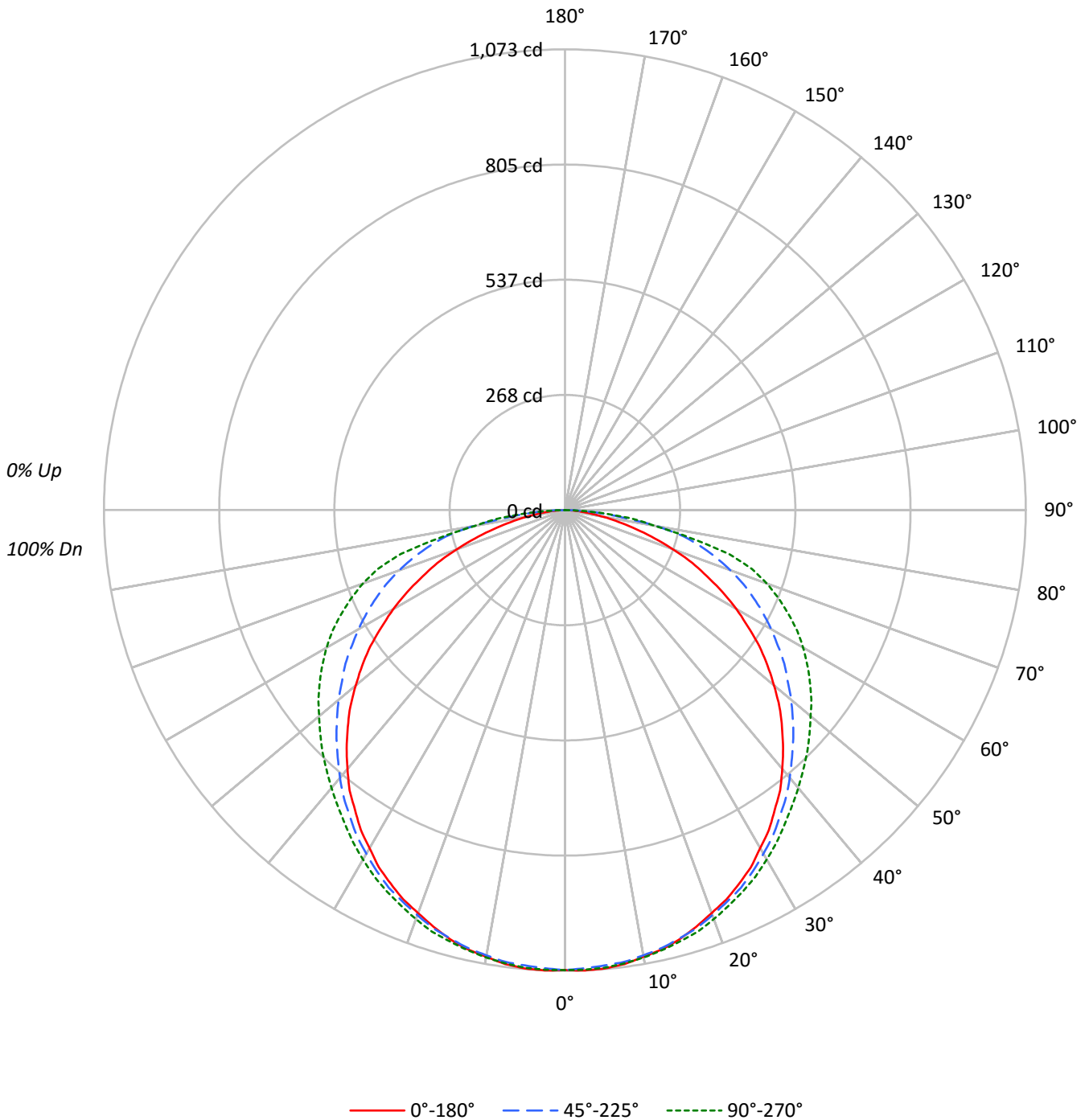
Input Watts (W): 43.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1442	1442	1442
5°	1447	1438	1445
10°	1443	1438	1445
15°	1441	1438	1448
20°	1430	1437	1452
25°	1425	1440	1455
30°	1413	1436	1460
35°	1399	1432	1466
40°	1383	1431	1484
45°	1360	1431	1518
50°	1330	1440	1563
55°	1296	1463	1633
60°	1241	1492	1724
65°	1162	1544	1829
70°	1057	1615	1968
75°	896	1704	2056
80°	707	1715	1663
85°	522	1304	1460



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.6	3.0
10°-20°	292.5	8.6
20°-30°	447.3	13.1
30°-40°	546.8	16.0
40°-50°	582.8	17.1
50°-60°	557.2	16.4
60°-70°	472.0	13.9
70°-80°	317.2	9.3
80°-90°	89.5	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°	841.4	24.7
0°-40°	1388.2	40.7
0°-60°	2528.2	74.2
0°-90°	3407.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3407.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1071	1071	1071	1071	1071	
5°	1071	1070	1065	1070	1070	102
15°	1034	1034	1032	1041	1039	292
25°	960	963	970	978	980	442
35°	852	858	872	889	892	534
45°	715	727	752	784	798	551
55°	553	573	624	673	696	492
65°	365	402	485	549	575	362
75°	172	235	328	384	395	185
85°	34	69	84	91	95	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1071.4	1071.4	1071.4	1071.4	1071.4
2.5°	1073.1	1073.1	1068.0	1071.4	1071.4
5°	1071.4	1069.7	1064.6	1069.7	1069.7
7.5°	1066.3	1064.6	1061.3	1066.3	1064.6
10°	1056.2	1056.2	1052.8	1057.9	1057.9
12.5°	1047.7	1046.1	1044.4	1051.1	1049.4
15°	1034.2	1034.2	1032.5	1041.0	1039.3
17.5°	1017.3	1019.0	1020.7	1027.5	1029.2
20°	998.7	1002.1	1003.8	1013.9	1013.9
22.5°	981.8	983.5	986.9	997.0	997.0
25°	959.9	963.2	970.0	978.5	980.1
27.5°	937.9	939.6	948.0	959.9	961.6
30°	909.2	914.2	924.4	937.9	939.6
32.5°	883.8	888.9	900.7	914.2	917.6
35°	851.7	858.5	872.0	888.9	892.3
37.5°	823.0	828.1	845.0	863.5	868.6
40°	787.5	797.6	814.5	836.5	845.0
42.5°	752.0	762.2	782.4	811.2	821.3
45°	714.8	726.7	752.0	784.1	797.6
47.5°	677.7	691.2	719.9	757.1	772.3
50°	635.4	652.3	687.8	730.0	746.9
52.5°	594.8	615.1	654.0	701.3	723.3
55°	552.6	572.9	623.6	672.6	696.2
57.5°	505.3	532.3	588.1	643.9	669.2
60°	461.3	486.7	554.3	615.1	640.5
62.5°	414.0	447.8	520.5	584.7	610.1
65°	365.0	402.2	485.0	549.2	574.6
67.5°	321.1	361.6	449.5	513.7	539.1
70°	268.7	319.4	410.6	474.9	500.2
72.5°	219.7	275.5	370.1	432.6	456.3
75°	172.4	234.9	327.8	383.6	395.4
77.5°	128.4	194.3	283.9	307.6	299.1
80°	91.3	155.5	221.4	209.5	214.6
82.5°	59.1	118.3	136.9	155.5	160.5
85°	33.8	69.3	84.5	91.3	94.6
87.5°	15.2	25.3	33.8	33.8	32.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)