

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: P310374

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-RDP-CP125-W2A-U-3000K**

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: P310374
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: 24FCZ2-65HE-UNV-L82765-RDP-CP125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET
Light Source: (336) 3000K 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: 3707.0 lumens
Efficiency: N/A
Efficacy: 71.0 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

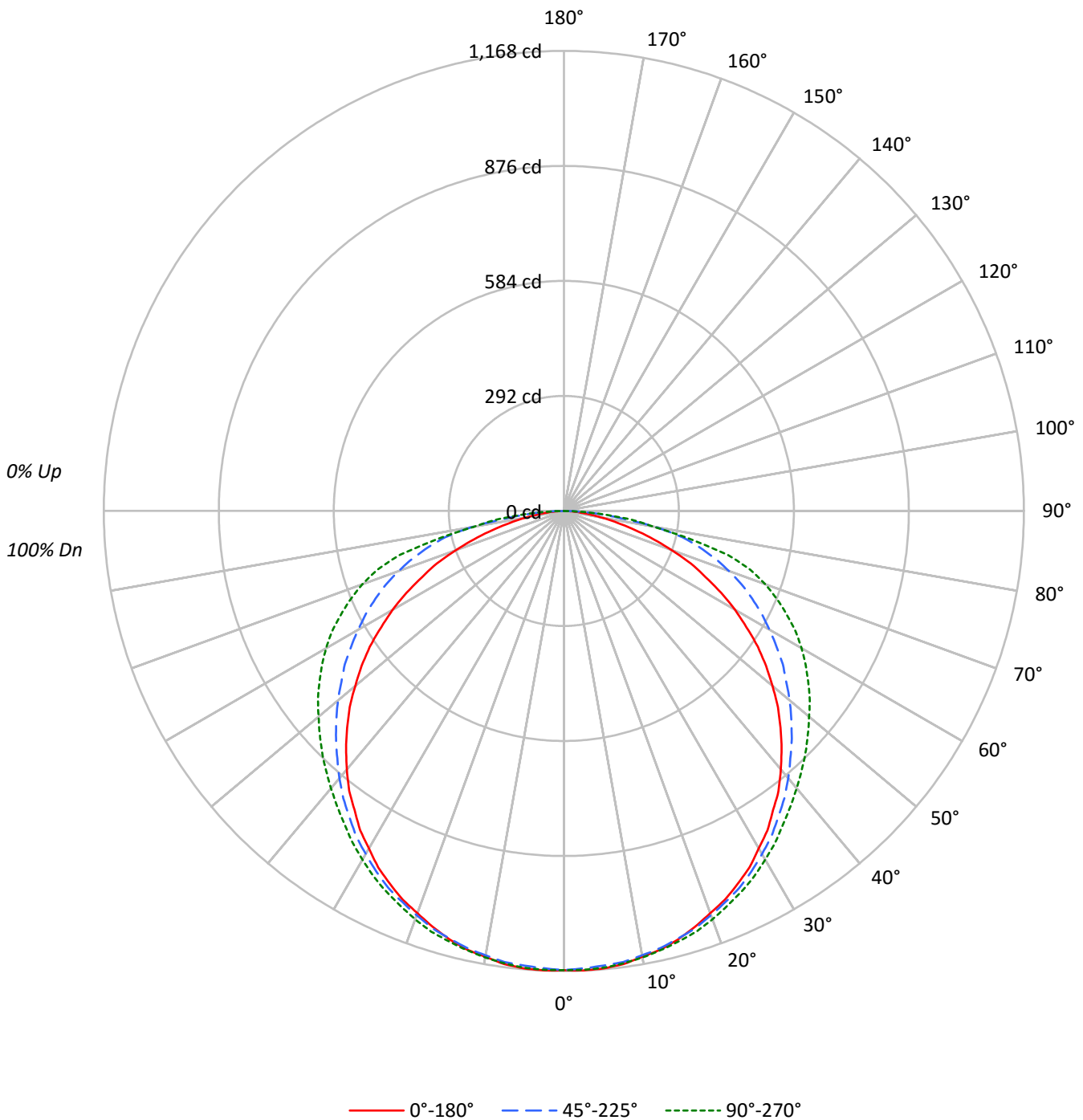
Input Watts (W): 52.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1568	1568	1568
5°	1574	1565	1572
10°	1570	1565	1573
15°	1567	1565	1575
20°	1556	1564	1580
25°	1550	1567	1583
30°	1537	1563	1588
35°	1522	1558	1595
40°	1505	1557	1615
45°	1480	1557	1651
50°	1447	1567	1701
55°	1411	1592	1777
60°	1351	1623	1875
65°	1265	1680	1990
70°	1150	1758	2141
75°	975	1854	2237
80°	769	1867	1809
85°	568	1419	1590



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.6	3.0
10°-20°	318.3	8.6
20°-30°	486.7	13.1
30°-40°	595.0	16.0
40°-50°	634.1	17.1
50°-60°	606.3	16.4
60°-70°	513.6	13.9
70°-80°	345.2	9.3
80°-90°	97.4	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°	915.5	24.7
0°-40°	1510.5	40.7
0°-60°	2750.9	74.2
0°-90°	3707.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3707.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1166	1166	1166	1166	1166	
5°	1166	1164	1158	1164	1164	111
15°	1125	1125	1124	1133	1131	317
25°	1044	1048	1055	1065	1066	481
35°	927	934	949	967	971	581
45°	778	791	818	853	868	600
55°	601	623	678	732	758	536
65°	397	438	528	598	625	394
75°	188	256	357	417	430	201
85°	37	75	92	99	103	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1165.7	1165.7	1165.7	1165.7	1165.7
2.5°	1167.6	1167.6	1162.1	1165.7	1165.7
5°	1165.7	1163.9	1158.4	1163.9	1163.9
7.5°	1160.2	1158.4	1154.7	1160.2	1158.4
10°	1149.2	1149.2	1145.5	1151.0	1151.0
12.5°	1140.0	1138.2	1136.3	1143.7	1141.8
15°	1125.3	1125.3	1123.5	1132.6	1130.8
17.5°	1106.9	1108.7	1110.6	1117.9	1119.8
20°	1086.7	1090.4	1092.2	1103.2	1103.2
22.5°	1068.3	1070.1	1073.8	1084.8	1084.8
25°	1044.4	1048.1	1055.4	1064.6	1066.5
27.5°	1020.5	1022.3	1031.5	1044.4	1046.2
30°	989.2	994.7	1005.8	1020.5	1022.3
32.5°	961.6	967.2	980.0	994.7	998.4
35°	926.7	934.1	948.8	967.2	970.8
37.5°	895.5	901.0	919.4	939.6	945.1
40°	856.8	867.9	886.3	910.2	919.4
42.5°	818.2	829.3	851.3	882.6	893.6
45°	777.8	790.6	818.2	853.2	867.9
47.5°	737.3	752.0	783.3	823.7	840.3
50°	691.4	709.7	748.4	794.3	812.7
52.5°	647.2	669.3	711.6	763.1	787.0
55°	601.3	623.3	678.5	731.8	757.6
57.5°	549.8	579.2	639.9	700.6	728.1
60°	502.0	529.6	603.1	669.3	696.9
62.5°	450.5	487.3	566.3	636.2	663.8
65°	397.2	437.6	527.7	597.6	625.2
67.5°	349.4	393.5	489.1	559.0	586.6
70°	292.4	347.5	446.8	516.7	544.3
72.5°	239.0	299.7	402.7	470.7	496.5
75°	187.5	255.6	356.7	417.4	430.3
77.5°	139.7	211.5	308.9	334.6	325.5
80°	99.3	169.2	240.9	228.0	233.5
82.5°	64.4	128.7	148.9	169.2	174.7
85°	36.8	75.4	91.9	99.3	103.0
87.5°	16.5	27.6	36.8	36.8	34.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)