

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: P310368

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-RDP-CA125-W2A-U-4500K**

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: P310368
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-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (336) 4500K 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: 4068.0 lumens
Efficiency: N/A
Efficacy: 75.9 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

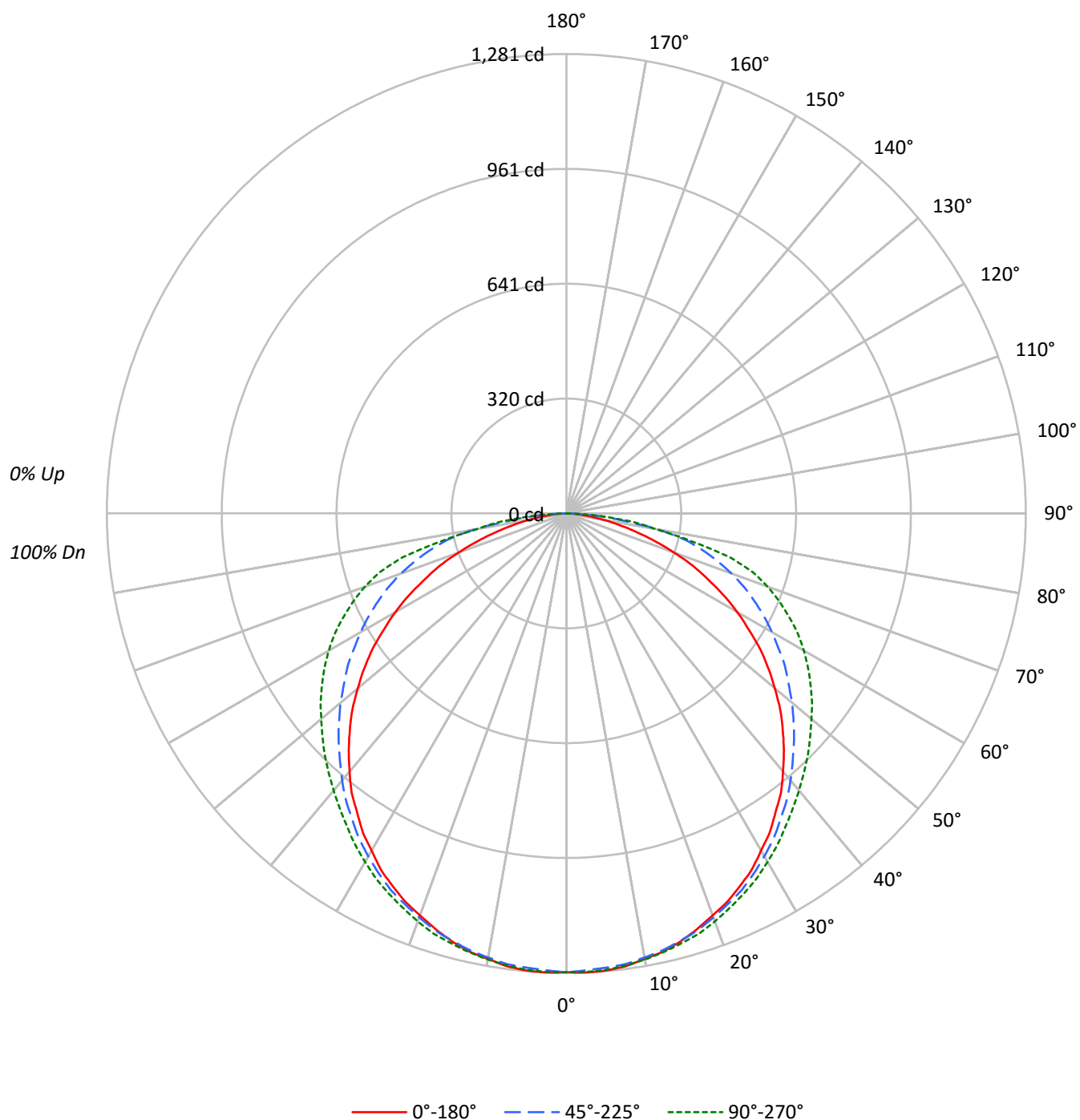
Input Watts (W): 53.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1721	1721	1721
5°	1728	1717	1725
10°	1723	1718	1726
15°	1720	1717	1729
20°	1707	1716	1734
25°	1701	1719	1737
30°	1687	1715	1743
35°	1670	1710	1750
40°	1652	1708	1772
45°	1624	1709	1812
50°	1588	1719	1867
55°	1548	1747	1950
60°	1482	1781	2058
65°	1387	1844	2184
70°	1262	1929	2350
75°	1070	2035	2455
80°	845	2048	1986
85°	624	1558	1744



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.4	3.0
10°-20°	349.2	8.6
20°-30°	534.1	13.1
30°-40°	652.9	16.0
40°-50°	695.8	17.1
50°-60°	665.3	16.4
60°-70°	563.6	13.9
70°-80°	378.8	9.3
80°-90°	106.9	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°	1004.7	24.7
0°-40°	1657.6	40.7
0°-60°	3018.8	74.2
0°-90°	4068.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4068.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1279	1279	1279	1279	1279	
5°	1279	1277	1271	1277	1277	122
15°	1235	1235	1233	1243	1241	348
25°	1146	1150	1158	1168	1170	528
35°	1017	1025	1041	1061	1065	637
45°	854	868	898	936	952	658
55°	660	684	745	803	831	588
65°	436	480	579	656	686	433
75°	206	280	391	458	472	220
85°	40	83	101	109	113	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1279.3	1279.3	1279.3	1279.3	1279.3
2.5°	1281.3	1281.3	1275.2	1279.3	1279.3
5°	1279.3	1277.3	1271.2	1277.3	1277.3
7.5°	1273.2	1271.2	1267.2	1273.2	1271.2
10°	1261.1	1261.1	1257.1	1263.1	1263.1
12.5°	1251.0	1249.0	1247.0	1255.1	1253.0
15°	1234.9	1234.9	1232.9	1242.9	1240.9
17.5°	1214.7	1216.7	1218.7	1226.8	1228.8
20°	1192.5	1196.5	1198.6	1210.7	1210.7
22.5°	1172.3	1174.3	1178.4	1190.5	1190.5
25°	1146.1	1150.1	1158.2	1168.3	1170.3
27.5°	1119.9	1121.9	1132.0	1146.1	1148.1
30°	1085.6	1091.6	1103.7	1119.9	1121.9
32.5°	1055.3	1061.4	1075.5	1091.6	1095.7
35°	1017.0	1025.0	1041.2	1061.4	1065.4
37.5°	982.7	988.7	1008.9	1031.1	1037.1
40°	940.3	952.4	972.6	998.8	1008.9
42.5°	897.9	910.0	934.2	968.5	980.6
45°	853.5	867.6	897.9	936.2	952.4
47.5°	809.1	825.3	859.6	904.0	922.1
50°	758.7	778.9	821.2	871.7	891.9
52.5°	710.3	734.5	780.9	837.4	863.6
55°	659.8	684.0	744.6	803.1	831.3
57.5°	603.3	635.6	702.2	768.8	799.0
60°	550.9	581.1	661.8	734.5	764.7
62.5°	494.4	534.7	621.5	698.2	728.4
65°	435.8	480.2	579.1	655.8	686.0
67.5°	383.4	431.8	536.7	613.4	643.7
70°	320.8	381.4	490.3	567.0	597.3
72.5°	262.3	328.9	441.9	516.6	544.8
75°	205.8	280.5	391.4	458.0	472.2
77.5°	153.4	232.0	339.0	367.2	357.1
80°	109.0	185.6	264.3	250.2	256.3
82.5°	70.6	141.2	163.4	185.6	191.7
85°	40.4	82.7	100.9	109.0	113.0
87.5°	18.2	30.3	40.4	40.4	38.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)