

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: P310419

Luminaire Tested: **24FCZ2-70HE-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: P310419
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: 24FCZ2-70HE-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: 3999.0 lumens
Efficiency: N/A
Efficacy: 69.8 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

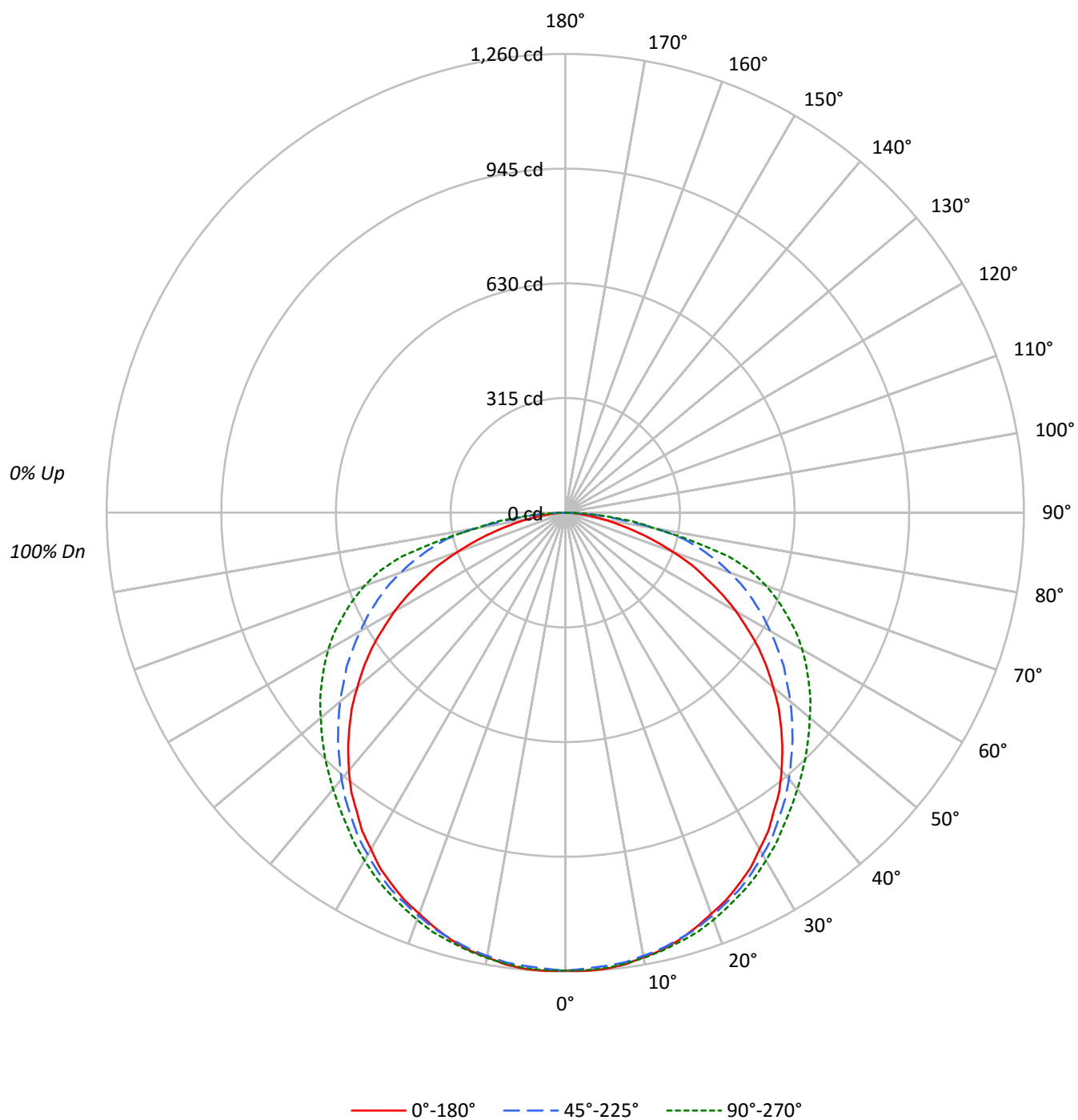
Input Watts (W): 57.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1692	1692	1692
5°	1699	1688	1696
10°	1694	1688	1696
15°	1691	1688	1699
20°	1679	1687	1704
25°	1673	1690	1708
30°	1658	1686	1714
35°	1642	1681	1720
40°	1623	1679	1742
45°	1596	1680	1781
50°	1561	1690	1835
55°	1521	1717	1917
60°	1457	1751	2023
65°	1364	1812	2147
70°	1241	1896	2310
75°	1052	2000	2413
80°	830	2013	1952
85°	613	1531	1715



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.3	3.0
10°-20°	343.3	8.6
20°-30°	525.0	13.1
30°-40°	641.8	16.0
40°-50°	684.1	17.1
50°-60°	654.0	16.4
60°-70°	554.1	13.9
70°-80°	372.4	9.3
80°-90°	105.0	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°	987.6	24.7
0°-40°	1629.4	40.7
0°-60°	2967.5	74.2
0°-90°	3999.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3999.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1258	1258	1258	1258	1258	
5°	1258	1256	1250	1256	1256	119
15°	1214	1214	1212	1222	1220	342
25°	1127	1131	1139	1148	1150	519
35°	1000	1008	1024	1043	1047	626
45°	839	853	883	920	936	647
55°	649	672	732	790	817	578
65°	428	472	569	645	674	425
75°	202	276	385	450	464	217
85°	40	81	99	107	111	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1257.6	1257.6	1257.6	1257.6	1257.6
2.5°	1259.6	1259.6	1253.6	1257.6	1257.6
5°	1257.6	1255.6	1249.6	1255.6	1255.6
7.5°	1251.6	1249.6	1245.7	1251.6	1249.6
10°	1239.7	1239.7	1235.8	1241.7	1241.7
12.5°	1229.8	1227.8	1225.8	1233.8	1231.8
15°	1213.9	1213.9	1211.9	1221.9	1219.9
17.5°	1194.1	1196.1	1198.1	1206.0	1208.0
20°	1172.3	1176.2	1178.2	1190.1	1190.1
22.5°	1152.4	1154.4	1158.4	1170.3	1170.3
25°	1126.7	1130.6	1138.6	1148.5	1150.5
27.5°	1100.9	1102.9	1112.8	1126.7	1128.6
30°	1067.2	1073.1	1085.0	1100.9	1102.9
32.5°	1037.4	1043.3	1057.2	1073.1	1077.1
35°	999.7	1007.6	1023.5	1043.3	1047.3
37.5°	966.0	971.9	991.8	1013.6	1019.5
40°	924.3	936.2	956.1	981.9	991.8
42.5°	882.7	894.6	918.4	952.1	964.0
45°	839.0	852.9	882.7	920.4	936.2
47.5°	795.4	811.3	845.0	888.6	906.5
50°	745.8	765.7	807.3	856.9	876.7
52.5°	698.2	722.0	767.6	823.2	849.0
55°	648.6	672.4	731.9	789.5	817.2
57.5°	593.1	624.8	690.3	755.7	785.5
60°	541.5	571.3	650.6	722.0	751.8
62.5°	486.0	525.6	610.9	686.3	716.1
65°	428.4	472.1	569.3	644.7	674.4
67.5°	376.9	424.5	527.6	603.0	632.8
70°	315.4	374.9	482.0	557.4	587.1
72.5°	257.9	323.3	434.4	507.8	535.6
75°	202.3	275.7	384.8	450.3	464.2
77.5°	150.7	228.1	333.2	361.0	351.1
80°	107.1	182.5	259.8	246.0	251.9
82.5°	69.4	138.8	160.7	182.5	188.4
85°	39.7	81.3	99.2	107.1	111.1
87.5°	17.9	29.8	39.7	39.7	37.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)