

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: P310442

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-RDP-CP250-W2A-U-5500K**

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: P310442
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-CP250-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 5500K 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: 4184.0 lumens
Efficiency: N/A
Efficacy: 70.6 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

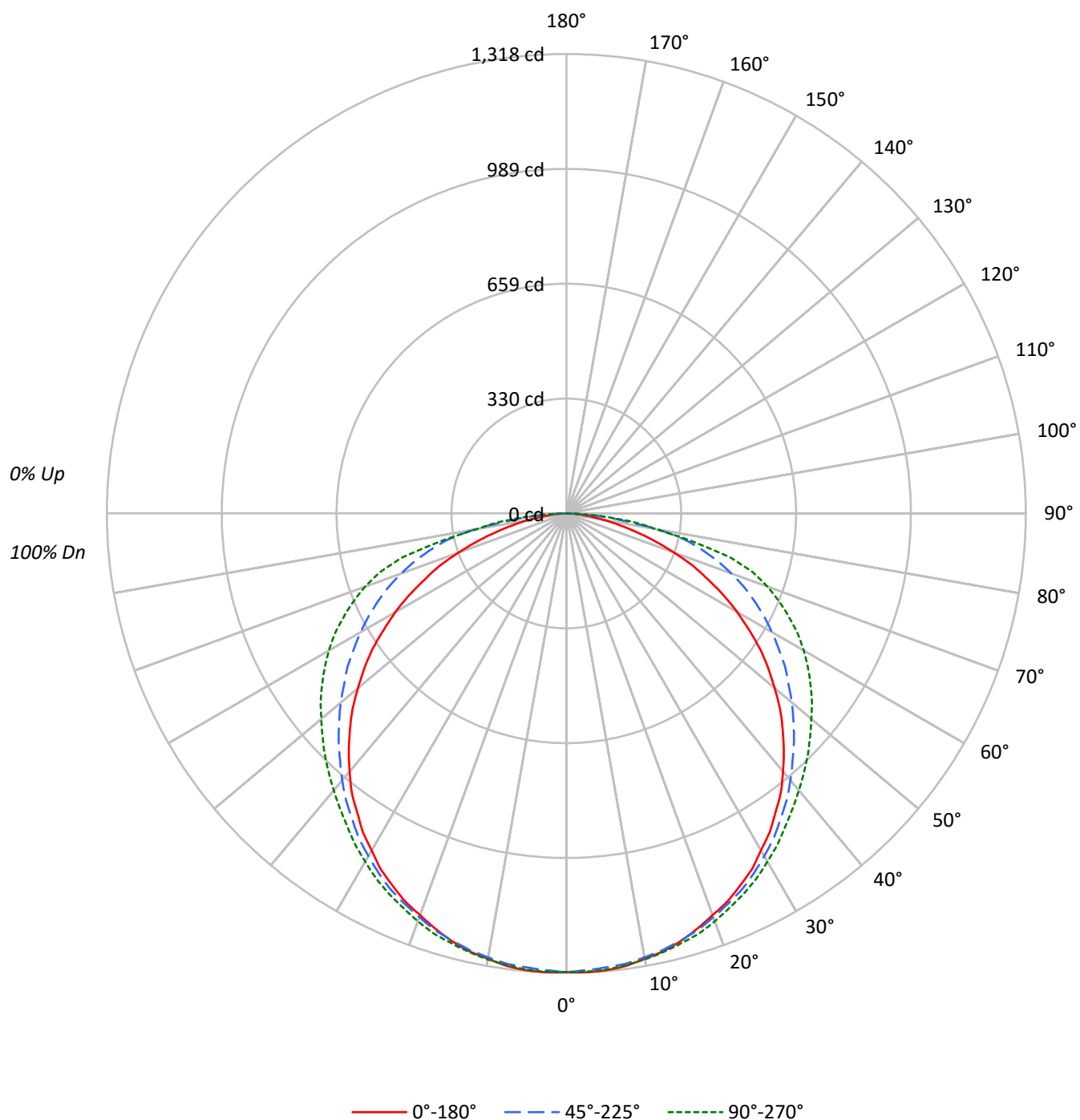
Input Watts (W): 59.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1770	1770	1770
5°	1777	1766	1774
10°	1772	1766	1775
15°	1769	1766	1778
20°	1756	1765	1783
25°	1750	1768	1787
30°	1735	1764	1793
35°	1718	1759	1800
40°	1699	1757	1823
45°	1670	1757	1864
50°	1633	1768	1920
55°	1592	1796	2006
60°	1525	1832	2116
65°	1427	1896	2246
70°	1298	1984	2417
75°	1101	2093	2524
80°	869	2107	2042
85°	641	1602	1794



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.8	3.0
10°-20°	359.2	8.6
20°-30°	549.3	13.1
30°-40°	671.5	16.0
40°-50°	715.7	17.1
50°-60°	684.3	16.4
60°-70°	579.7	13.9
70°-80°	389.6	9.3
80°-90°	109.9	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°	1033.3	24.7
0°-40°	1704.8	40.7
0°-60°	3104.8	74.2
0°-90°	4184.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4184.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1316	1316	1316	1316	1316	
5°	1316	1314	1307	1314	1314	125
15°	1270	1270	1268	1278	1276	358
25°	1179	1183	1191	1202	1204	543
35°	1046	1054	1071	1092	1096	655
45°	878	892	924	963	980	677
55°	679	704	766	826	855	604
65°	448	494	596	674	706	445
75°	212	288	403	471	486	227
85°	42	85	104	112	116	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1315.7	1315.7	1315.7	1315.7	1315.7
2.5°	1317.8	1317.8	1311.6	1315.7	1315.7
5°	1315.7	1313.7	1307.4	1313.7	1313.7
7.5°	1309.5	1307.4	1303.3	1309.5	1307.4
10°	1297.1	1297.1	1292.9	1299.1	1299.1
12.5°	1286.7	1284.6	1282.5	1290.8	1288.8
15°	1270.1	1270.1	1268.0	1278.4	1276.3
17.5°	1249.3	1251.4	1253.5	1261.8	1263.9
20°	1226.5	1230.7	1232.7	1245.2	1245.2
22.5°	1205.8	1207.8	1212.0	1224.4	1224.4
25°	1178.8	1182.9	1191.2	1201.6	1203.7
27.5°	1151.8	1153.9	1164.3	1178.8	1180.9
30°	1116.5	1122.7	1135.2	1151.8	1153.9
32.5°	1085.4	1091.6	1106.1	1122.7	1126.9
35°	1046.0	1054.3	1070.9	1091.6	1095.8
37.5°	1010.7	1016.9	1037.7	1060.5	1066.7
40°	967.1	979.5	1000.3	1027.3	1037.7
42.5°	923.5	936.0	960.9	996.2	1008.6
45°	877.9	892.4	923.5	962.9	979.5
47.5°	832.2	848.8	884.1	929.7	948.4
50°	780.3	801.1	844.7	896.5	917.3
52.5°	730.5	755.4	803.1	861.3	888.2
55°	678.6	703.5	765.8	826.0	855.0
57.5°	620.5	653.7	722.2	790.7	821.8
60°	566.6	597.7	680.7	755.4	786.5
62.5°	508.5	550.0	639.2	718.1	749.2
65°	448.3	493.9	595.6	674.5	705.6
67.5°	394.3	444.1	552.0	630.9	662.0
70°	330.0	392.2	504.3	583.2	614.3
72.5°	269.8	338.3	454.5	531.3	560.3
75°	211.7	288.5	402.6	471.1	485.6
77.5°	157.7	238.7	348.7	377.7	367.3
80°	112.1	190.9	271.9	257.3	263.6
82.5°	72.6	145.3	168.1	190.9	197.2
85°	41.5	85.1	103.8	112.1	116.2
87.5°	18.7	31.1	41.5	41.5	39.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)