

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: P311036

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-CA08-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: P311036
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-CA08-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC 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: 6213.0 lumens
Efficiency: N/A
Efficacy: 114.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

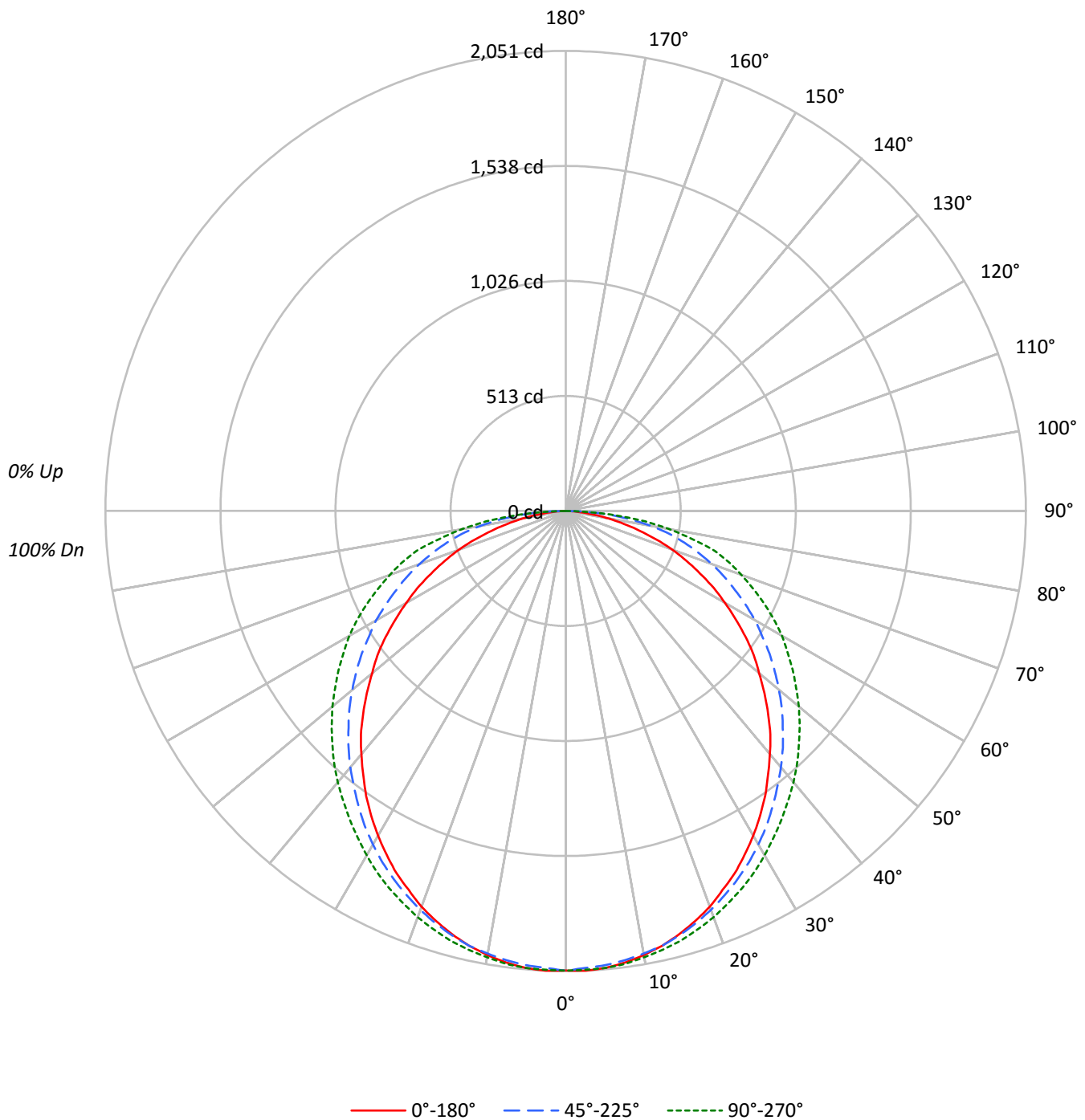
Input Watts (W): 54.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2757	2757	2757
5°	2762	2745	2762
10°	2746	2737	2760
15°	2722	2728	2762
20°	2689	2709	2760
25°	2647	2690	2757
30°	2597	2668	2754
35°	2546	2641	2756
40°	2487	2621	2773
45°	2428	2604	2797
50°	2356	2597	2839
55°	2297	2601	2897
60°	2208	2624	2995
65°	2107	2651	3104
70°	1995	2733	3276
75°	1779	2850	3579
80°	1517	3019	3658
85°	1082	2992	3500



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.9	3.1
10°-20°	554.5	8.9
20°-30°	837.5	13.5
30°-40°	1009.4	16.2
40°-50°	1059.6	17.1
50°-60°	991.3	16.0
60°-70°	818.7	13.2
70°-80°	557.9	9.0
80°-90°	190.2	3.1
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°	1585.9	25.5
0°-40°	2595.2	41.8
0°-60°	4646.2	74.8
0°-90°	6213.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6213.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2049	2049	2049	2049	2049	
5°	2045	2043	2032	2045	2045	194
15°	1954	1956	1958	1979	1983	551
25°	1783	1791	1812	1847	1857	820
35°	1550	1567	1608	1662	1678	969
45°	1276	1303	1369	1443	1470	984
55°	979	1018	1109	1200	1235	874
65°	662	717	833	938	975	656
75°	342	420	548	651	688	365
85°	70	138	194	218	227	88
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2049.0	2049.0	2049.0	2049.0	2049.0
2.5°	2051.1	2049.0	2038.7	2049.0	2046.9
5°	2044.9	2042.8	2032.5	2044.9	2044.9
7.5°	2030.4	2030.4	2020.1	2034.6	2036.6
10°	2009.8	2009.8	2003.6	2020.1	2020.1
12.5°	1985.1	1985.1	1985.1	2001.6	2003.6
15°	1954.2	1956.2	1958.3	1978.9	1983.0
17.5°	1917.1	1921.2	1927.4	1952.1	1956.2
20°	1877.9	1882.0	1892.3	1921.2	1927.4
22.5°	1828.4	1838.7	1853.2	1886.1	1892.3
25°	1783.1	1791.3	1811.9	1847.0	1857.3
27.5°	1727.4	1739.8	1766.6	1803.7	1818.1
30°	1671.8	1684.1	1717.1	1760.4	1772.8
32.5°	1612.0	1630.5	1665.6	1710.9	1725.4
35°	1550.1	1566.6	1607.9	1661.5	1677.9
37.5°	1482.1	1504.8	1550.1	1607.9	1628.5
40°	1416.2	1440.9	1492.4	1554.3	1579.0
42.5°	1350.2	1374.9	1432.6	1502.7	1527.5
45°	1276.0	1302.8	1368.7	1443.0	1469.8
47.5°	1201.8	1234.8	1306.9	1385.2	1414.1
50°	1125.5	1162.6	1240.9	1323.4	1356.4
52.5°	1057.5	1092.5	1175.0	1263.6	1294.5
55°	979.1	1018.3	1109.0	1199.7	1234.8
57.5°	898.8	942.0	1038.9	1137.9	1172.9
60°	820.4	867.8	975.0	1074.0	1113.1
62.5°	744.2	791.6	902.9	1005.9	1045.1
65°	661.7	717.4	832.8	937.9	975.0
67.5°	583.4	643.1	764.8	867.8	904.9
70°	507.1	564.8	694.7	795.7	832.8
72.5°	424.6	490.6	620.5	725.6	764.8
75°	342.2	420.5	548.3	651.4	688.5
77.5°	265.9	346.3	474.1	558.6	577.2
80°	195.8	278.3	389.6	449.4	472.1
82.5°	125.7	208.2	296.8	340.1	358.7
85°	70.1	138.1	193.8	218.5	226.7
87.5°	28.9	59.8	78.3	88.6	88.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)