

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: P311074

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-CP250-W2A-U-6500K**

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: P311074
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-CP250-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (336) 6500K 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: 5797.0 lumens
Efficiency: N/A
Efficacy: 105.6 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

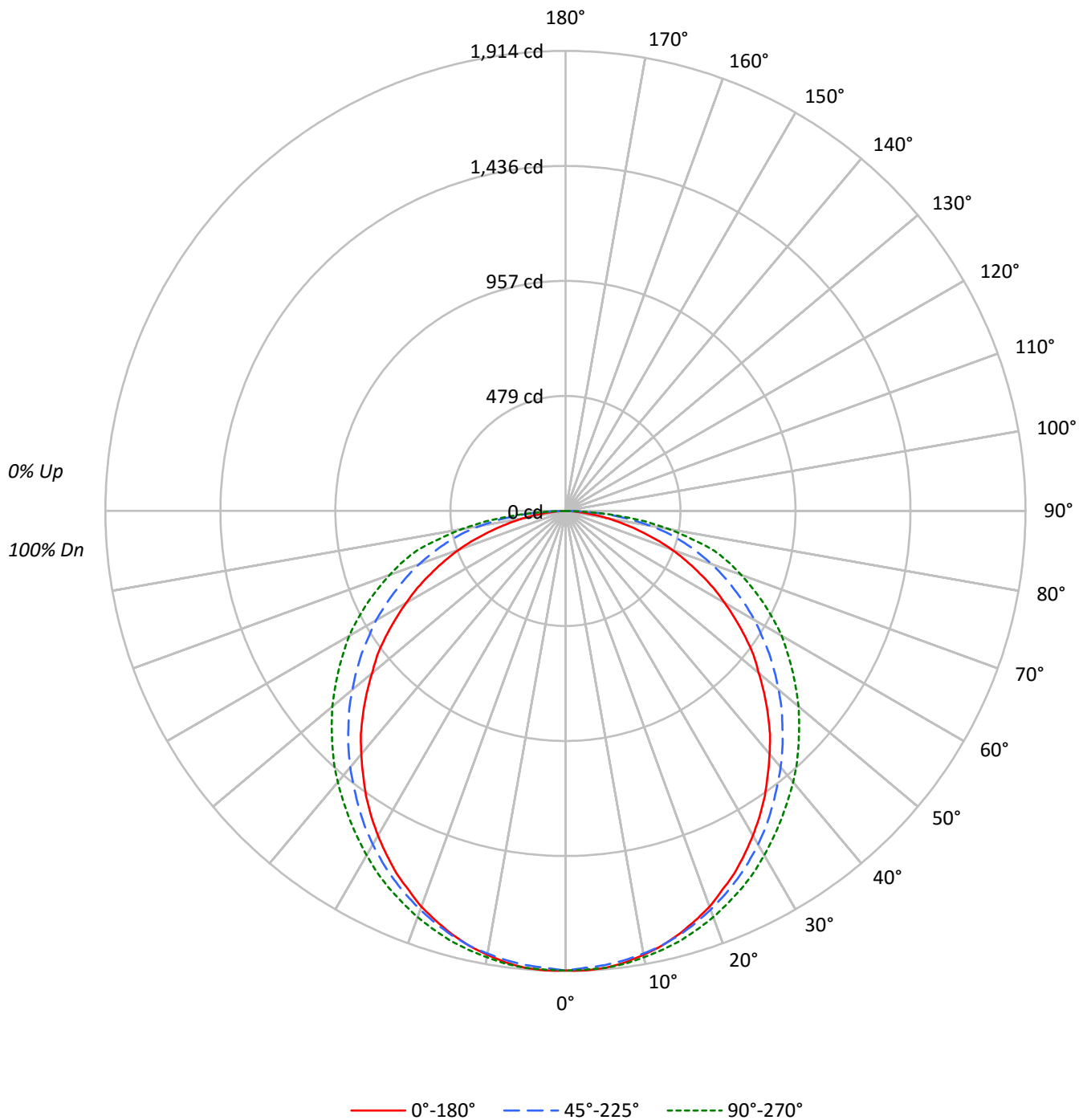
Input Watts (W): 54.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2572	2572	2572
5°	2577	2561	2577
10°	2562	2554	2575
15°	2540	2545	2577
20°	2509	2528	2575
25°	2470	2510	2573
30°	2423	2489	2570
35°	2376	2464	2572
40°	2321	2446	2588
45°	2265	2430	2609
50°	2198	2424	2649
55°	2143	2427	2703
60°	2060	2448	2795
65°	1966	2474	2896
70°	1861	2550	3057
75°	1660	2660	3340
80°	1416	2817	3412
85°	1010	2791	3267



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	180.9	3.1
10°-20°	517.3	8.9
20°-30°	781.4	13.5
30°-40°	941.8	16.2
40°-50°	988.7	17.1
50°-60°	925.0	16.0
60°-70°	763.9	13.2
70°-80°	520.5	9.0
80°-90°	177.5	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°	1479.7	25.5
0°-40°	2421.5	41.8
0°-60°	4335.1	74.8
0°-90°	5797.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5797.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1912	1912	1912	1912	1912	
5°	1908	1906	1896	1908	1908	181
15°	1823	1825	1827	1846	1850	514
25°	1664	1671	1691	1723	1733	765
35°	1446	1462	1500	1550	1566	904
45°	1190	1216	1277	1346	1371	918
55°	914	950	1035	1119	1152	815
65°	617	669	777	875	910	612
75°	319	392	512	608	642	340
85°	65	129	181	204	212	82
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1911.8	1911.8	1911.8	1911.8	1911.8
2.5°	1913.7	1911.8	1902.2	1911.8	1909.9
5°	1908.0	1906.0	1896.4	1908.0	1908.0
7.5°	1894.5	1894.5	1884.9	1898.3	1900.3
10°	1875.3	1875.3	1869.5	1884.9	1884.9
12.5°	1852.2	1852.2	1852.2	1867.6	1869.5
15°	1823.3	1825.2	1827.2	1846.4	1850.3
17.5°	1788.7	1792.6	1798.3	1821.4	1825.2
20°	1752.2	1756.0	1765.6	1792.6	1798.3
22.5°	1706.0	1715.6	1729.1	1759.9	1765.6
25°	1663.7	1671.4	1690.6	1723.3	1732.9
27.5°	1611.8	1623.3	1648.3	1682.9	1696.4
30°	1559.8	1571.4	1602.1	1642.5	1654.1
32.5°	1504.1	1521.4	1554.1	1596.4	1609.8
35°	1446.4	1461.7	1500.2	1550.2	1565.6
37.5°	1382.9	1404.0	1446.4	1500.2	1519.4
40°	1321.3	1344.4	1392.5	1450.2	1473.3
42.5°	1259.8	1282.9	1336.7	1402.1	1425.2
45°	1190.5	1215.6	1277.1	1346.3	1371.3
47.5°	1121.3	1152.1	1219.4	1292.5	1319.4
50°	1050.1	1084.8	1157.9	1234.8	1265.6
52.5°	986.7	1019.4	1096.3	1179.0	1207.9
55°	913.6	950.1	1034.8	1119.4	1152.1
57.5°	838.6	879.0	969.4	1061.7	1094.4
60°	765.5	809.7	909.7	1002.1	1038.6
62.5°	694.3	738.6	842.4	938.6	975.1
65°	617.4	669.3	777.0	875.1	909.7
67.5°	544.3	600.1	713.6	809.7	844.3
70°	473.1	527.0	648.2	742.4	777.0
72.5°	396.2	457.8	578.9	677.0	713.6
75°	319.3	392.4	511.6	607.8	642.4
77.5°	248.1	323.1	442.4	521.2	538.5
80°	182.7	259.7	363.5	419.3	440.4
82.5°	117.3	194.3	277.0	317.4	334.7
85°	65.4	128.9	180.8	203.9	211.6
87.5°	26.9	55.8	73.1	82.7	82.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)