

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: P311072

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-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: P311072
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-5500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 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: 5766.0 lumens
Efficiency: N/A
Efficacy: 106.6 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

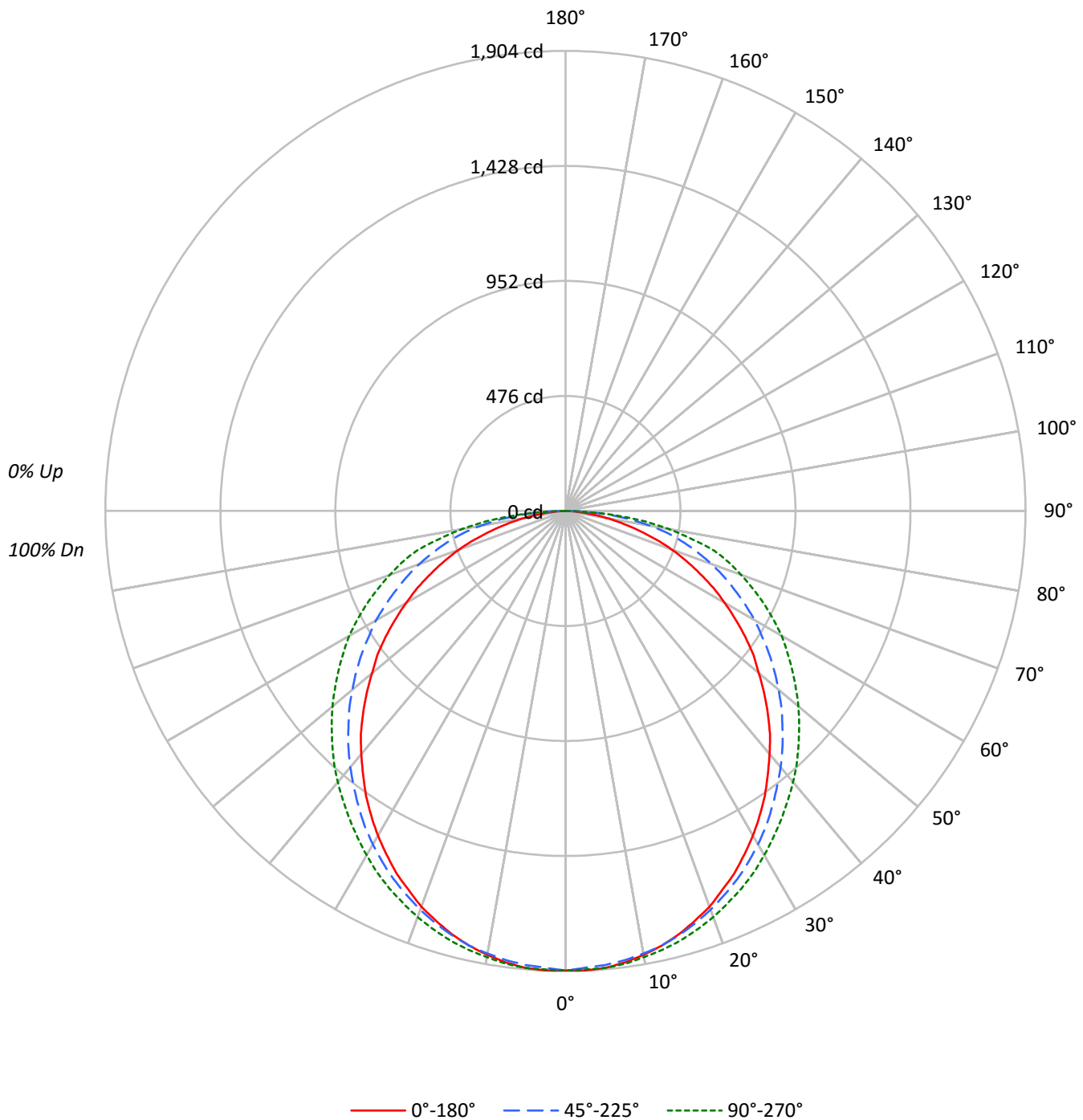
Input Watts (W): 54.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2559	2559	2559
5°	2563	2548	2563
10°	2548	2541	2561
15°	2526	2532	2564
20°	2495	2515	2561
25°	2457	2496	2559
30°	2410	2476	2556
35°	2363	2451	2558
40°	2308	2433	2574
45°	2253	2417	2595
50°	2186	2411	2635
55°	2132	2414	2688
60°	2049	2435	2780
65°	1955	2461	2881
70°	1851	2536	3041
75°	1651	2646	3322
80°	1408	2802	3395
85°	1003	2776	3248



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	180.0	3.1
10°-20°	514.6	8.9
20°-30°	777.2	13.5
30°-40°	936.7	16.2
40°-50°	983.4	17.1
50°-60°	920.0	16.0
60°-70°	759.8	13.2
70°-80°	517.7	9.0
80°-90°	176.6	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°	1471.8	25.5
0°-40°	2408.5	41.8
0°-60°	4311.9	74.8
0°-90°	5766.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5766.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1902	1902	1902	1902	1902	
5°	1898	1896	1886	1898	1898	180
15°	1814	1816	1817	1836	1840	511
25°	1655	1662	1682	1714	1724	761
35°	1439	1454	1492	1542	1557	899
45°	1184	1209	1270	1339	1364	913
55°	909	945	1029	1113	1146	811
65°	614	666	773	870	905	609
75°	318	390	509	604	639	339
85°	65	128	180	203	210	81
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1901.6	1901.6	1901.6	1901.6	1901.6
2.5°	1903.5	1901.6	1892.0	1901.6	1899.7
5°	1897.8	1895.8	1886.3	1897.8	1897.8
7.5°	1884.4	1884.4	1874.8	1888.2	1890.1
10°	1865.2	1865.2	1859.5	1874.8	1874.8
12.5°	1842.3	1842.3	1842.3	1857.6	1859.5
15°	1813.6	1815.5	1817.4	1836.5	1840.4
17.5°	1779.1	1783.0	1788.7	1811.7	1815.5
20°	1742.8	1746.6	1756.2	1783.0	1788.7
22.5°	1696.9	1706.4	1719.8	1750.4	1756.2
25°	1654.8	1662.4	1681.6	1714.1	1723.7
27.5°	1603.1	1614.6	1639.5	1673.9	1687.3
30°	1551.5	1563.0	1593.6	1633.7	1645.2
32.5°	1496.0	1513.2	1545.7	1587.8	1601.2
35°	1438.6	1453.9	1492.2	1541.9	1557.2
37.5°	1375.5	1396.5	1438.6	1492.2	1511.3
40°	1314.3	1337.2	1385.1	1442.4	1465.4
42.5°	1253.1	1276.0	1329.6	1394.6	1417.6
45°	1184.2	1209.1	1270.3	1339.1	1364.0
47.5°	1115.3	1145.9	1212.9	1285.6	1312.4
50°	1044.5	1079.0	1151.7	1228.2	1258.8
52.5°	981.4	1013.9	1090.4	1172.7	1201.4
55°	908.7	945.0	1029.2	1113.4	1145.9
57.5°	834.1	874.3	964.2	1056.0	1088.5
60°	761.4	805.4	904.9	996.7	1033.0
62.5°	690.6	734.6	837.9	933.6	969.9
65°	614.1	665.7	772.9	870.4	904.9
67.5°	541.4	596.9	709.7	805.4	839.8
70°	470.6	524.2	644.7	738.4	772.9
72.5°	394.1	455.3	575.8	673.4	709.7
75°	317.6	390.3	508.9	604.5	639.0
77.5°	246.8	321.4	440.0	518.4	535.7
80°	181.7	258.3	361.6	417.0	438.1
82.5°	116.7	193.2	275.5	315.7	332.9
85°	65.0	128.2	179.8	202.8	210.4
87.5°	26.8	55.5	72.7	82.3	82.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)