

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: P311051

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-CP125-W2A-U-4000K**

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: P311051
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-CP125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 4000K 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: 5828.0 lumens
Efficiency: N/A
Efficacy: 109.5 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

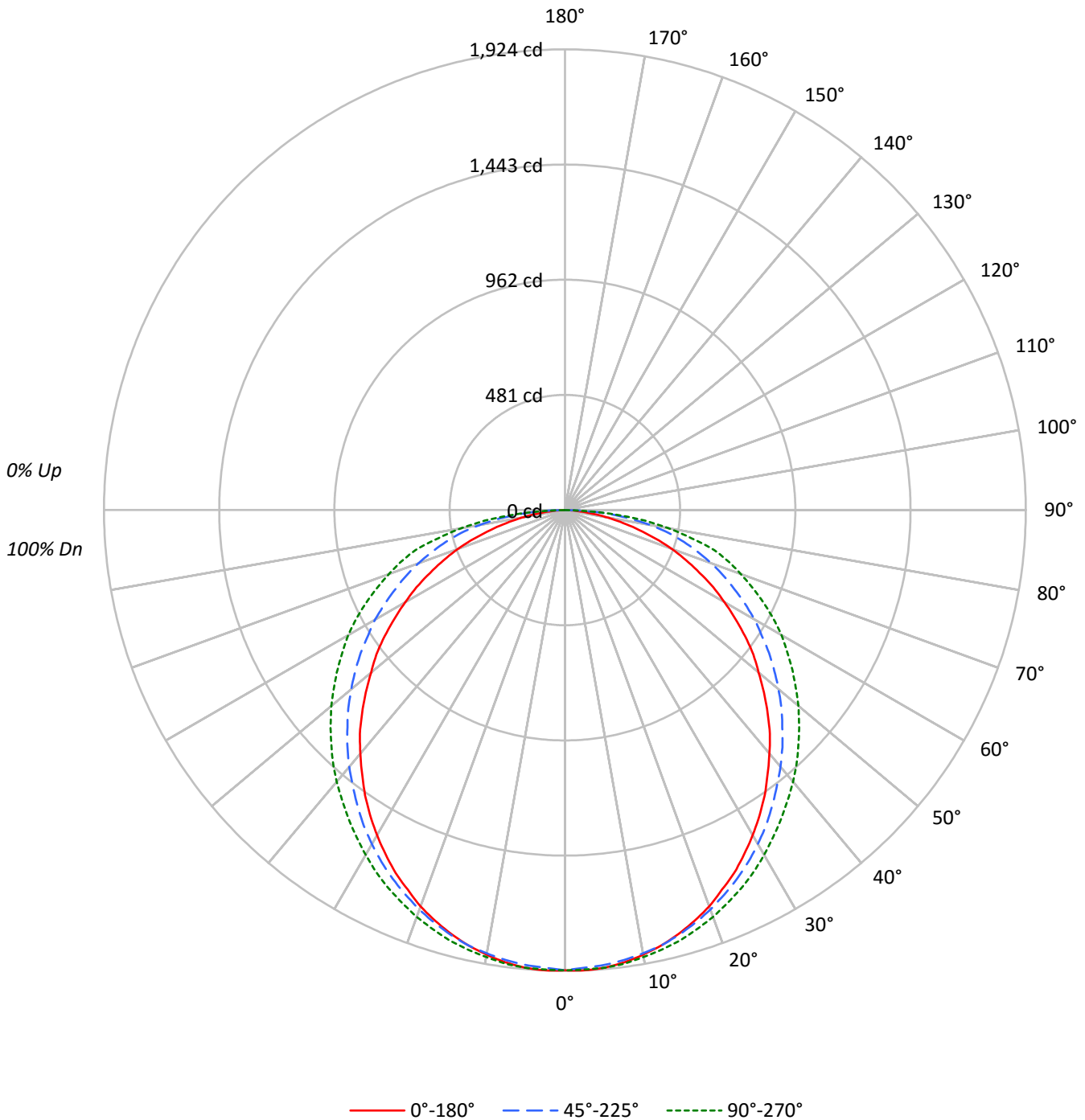
Input Watts (W): 53.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	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	102	102	102	100					100			
1	108	103	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82					82			
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67					67			
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56					56			
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47					47			
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41					41			
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36					36			
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31					31			
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28					28			
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25					25			
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23					23			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2586	2586	2586
5°	2591	2575	2591
10°	2576	2568	2589
15°	2553	2559	2591
20°	2522	2542	2589
25°	2483	2523	2586
30°	2436	2502	2584
35°	2388	2477	2585
40°	2333	2459	2602
45°	2277	2443	2623
50°	2210	2436	2663
55°	2155	2440	2717
60°	2071	2461	2810
65°	1976	2487	2912
70°	1871	2563	3073
75°	1669	2674	3357
80°	1423	2832	3431
85°	1014	2807	3284



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	181.9	3.1
10°-20°	520.1	8.9
20°-30°	785.6	13.5
30°-40°	946.8	16.2
40°-50°	994.0	17.1
50°-60°	929.9	16.0
60°-70°	768.0	13.2
70°-80°	523.3	9.0
80°-90°	178.5	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°	1487.6	25.5
0°-40°	2434.4	41.8
0°-60°	4358.3	74.8
0°-90°	5828.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5828.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1922	1922	1922	1922	1922	
5°	1918	1916	1907	1918	1918	182
15°	1833	1835	1837	1856	1860	517
25°	1673	1680	1700	1732	1742	770
35°	1454	1470	1508	1558	1574	909
45°	1197	1222	1284	1354	1379	923
55°	918	955	1040	1125	1158	820
65°	621	673	781	880	915	616
75°	321	394	514	611	646	342
85°	66	130	182	205	213	82
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1922.0	1922.0	1922.0	1922.0	1922.0
2.5°	1924.0	1922.0	1912.4	1922.0	1920.1
5°	1918.2	1916.2	1906.6	1918.2	1918.2
7.5°	1904.6	1904.6	1895.0	1908.5	1910.4
10°	1885.3	1885.3	1879.5	1895.0	1895.0
12.5°	1862.1	1862.1	1862.1	1877.6	1879.5
15°	1833.1	1835.0	1836.9	1856.3	1860.1
17.5°	1798.3	1802.1	1807.9	1831.1	1835.0
20°	1761.5	1765.4	1775.1	1802.1	1807.9
22.5°	1715.1	1724.8	1738.3	1769.3	1775.1
25°	1672.6	1680.3	1699.7	1732.5	1742.2
27.5°	1620.4	1632.0	1657.1	1691.9	1705.5
30°	1568.2	1579.8	1610.7	1651.3	1662.9
32.5°	1512.1	1529.5	1562.4	1604.9	1618.4
35°	1454.1	1469.6	1508.2	1558.5	1574.0
37.5°	1390.3	1411.5	1454.1	1508.2	1527.6
40°	1328.4	1351.6	1399.9	1458.0	1481.2
42.5°	1266.5	1289.7	1343.9	1409.6	1432.8
45°	1196.9	1222.1	1283.9	1353.5	1378.7
47.5°	1127.3	1158.2	1225.9	1299.4	1326.5
50°	1055.8	1090.6	1164.0	1241.4	1272.3
52.5°	991.9	1024.8	1102.2	1185.3	1214.3
55°	918.5	955.2	1040.3	1125.4	1158.2
57.5°	843.1	883.7	974.5	1067.4	1100.2
60°	769.6	814.1	914.6	1007.4	1044.2
62.5°	698.0	742.5	846.9	943.6	980.3
65°	620.7	672.9	781.2	879.8	914.6
67.5°	547.2	603.3	717.4	814.1	848.9
70°	475.7	529.8	651.6	746.4	781.2
72.5°	398.3	460.2	582.0	680.6	717.4
75°	321.0	394.5	514.3	611.0	645.8
77.5°	249.4	324.8	444.7	524.0	541.4
80°	183.7	261.0	365.5	421.5	442.8
82.5°	118.0	195.3	278.4	319.0	336.5
85°	65.7	129.6	181.8	205.0	212.7
87.5°	27.1	56.1	73.5	83.1	83.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)