

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: P311728

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-S-CP125-W2A-U-5000K**

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: P311728
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
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-S-CP125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (336) 5000K 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: 6317.0 lumens
Efficiency: N/A
Efficacy: 117.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

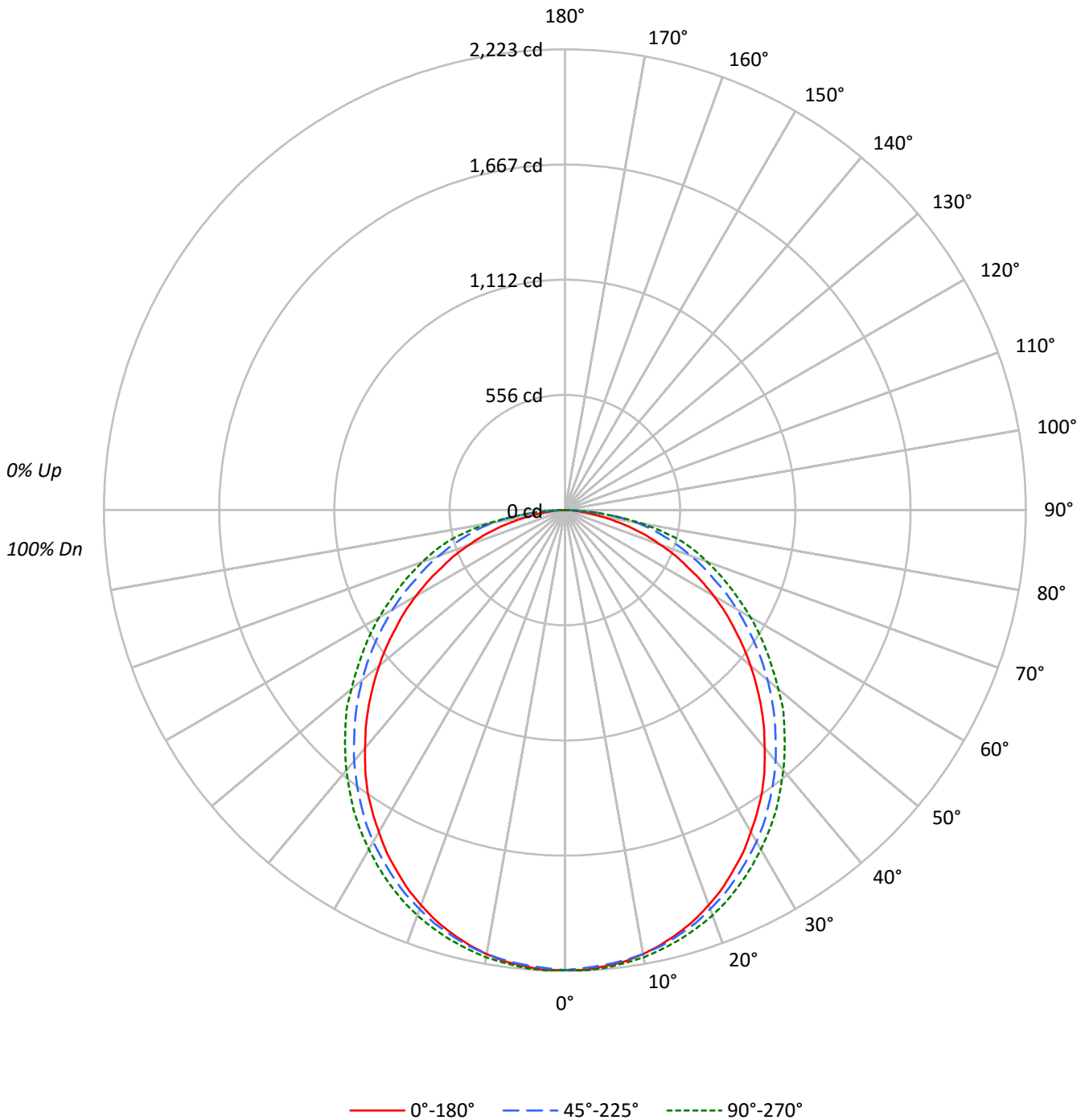
Input Watts (W): 53.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2986	2986	2986
5°	2984	2976	2995
10°	2972	2972	2994
15°	2943	2957	2988
20°	2905	2933	2979
25°	2851	2904	2961
30°	2787	2871	2937
35°	2726	2825	2914
40°	2633	2777	2879
45°	2547	2722	2848
50°	2449	2671	2814
55°	2339	2622	2787
60°	2230	2581	2781
65°	2089	2536	2798
70°	1934	2550	2873
75°	1732	2597	3035
80°	1399	2752	2969
85°	1053	2416	2354



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	210.1	3.3
10°-20°	600.3	9.5
20°-30°	902.4	14.3
30°-40°	1074.9	17.0
40°-50°	1100.1	17.4
50°-60°	990.4	15.7
60°-70°	777.8	12.3
70°-80°	504.8	8.0
80°-90°	156.1	2.5
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°	1712.8	27.1
0°-40°	2787.7	44.1
0°-60°	4878.3	77.2
0°-90°	6317.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6317.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2219	2219	2219	2219	2219	
5°	2209	2213	2203	2215	2217	210
15°	2113	2119	2123	2141	2145	596
25°	1920	1936	1956	1988	1994	885
35°	1659	1680	1720	1762	1774	1035
45°	1338	1370	1431	1485	1497	1032
55°	997	1041	1118	1176	1188	894
65°	656	706	797	863	879	653
75°	333	397	500	568	584	352
85°	68	126	156	152	152	82
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2219.2	2219.2	2219.2	2219.2	2219.2
2.5°	2221.2	2221.2	2211.2	2221.2	2223.2
5°	2209.2	2213.2	2203.2	2215.2	2217.2
7.5°	2197.1	2197.1	2191.1	2203.2	2205.2
10°	2175.1	2177.1	2175.1	2189.1	2191.1
12.5°	2147.0	2151.0	2153.0	2167.0	2169.0
15°	2112.9	2118.9	2122.9	2140.9	2145.0
17.5°	2074.7	2080.8	2090.8	2110.9	2114.9
20°	2028.6	2036.6	2048.6	2074.7	2080.8
22.5°	1978.4	1986.4	2006.5	2030.6	2040.6
25°	1920.2	1936.3	1956.4	1988.5	1994.5
27.5°	1862.0	1876.1	1902.2	1936.3	1944.3
30°	1793.8	1815.9	1848.0	1882.1	1890.1
32.5°	1727.6	1749.7	1787.8	1823.9	1834.0
35°	1659.4	1679.5	1719.6	1761.7	1773.8
37.5°	1581.1	1607.2	1651.4	1693.5	1705.5
40°	1498.9	1531.0	1581.1	1625.3	1639.3
42.5°	1420.6	1454.7	1504.9	1553.0	1569.1
45°	1338.3	1370.4	1430.6	1484.8	1496.9
47.5°	1254.1	1290.2	1354.4	1408.6	1428.6
50°	1169.8	1207.9	1276.1	1332.3	1344.4
52.5°	1085.5	1125.7	1197.9	1258.1	1264.1
55°	997.2	1041.4	1117.6	1175.8	1187.9
57.5°	917.0	955.1	1037.4	1097.6	1111.6
60°	828.7	870.8	959.1	1015.3	1033.4
62.5°	744.4	788.6	880.9	937.0	953.1
65°	656.1	706.3	796.6	862.8	878.9
67.5°	579.9	628.0	724.4	788.6	804.6
70°	491.6	545.8	648.1	714.3	730.4
72.5°	415.3	471.5	573.9	638.1	662.1
75°	333.1	397.3	499.6	567.8	583.9
77.5°	252.8	327.1	431.4	483.6	483.6
80°	180.6	258.8	355.2	379.2	383.2
82.5°	118.4	194.6	262.9	260.8	260.8
85°	68.2	126.4	156.5	152.5	152.5
87.5°	26.1	52.2	56.2	56.2	54.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)