

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: P311747

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-S-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: P311747
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-CP250-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH 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: 6059.0 lumens
Efficiency: N/A
Efficacy: 112.0 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

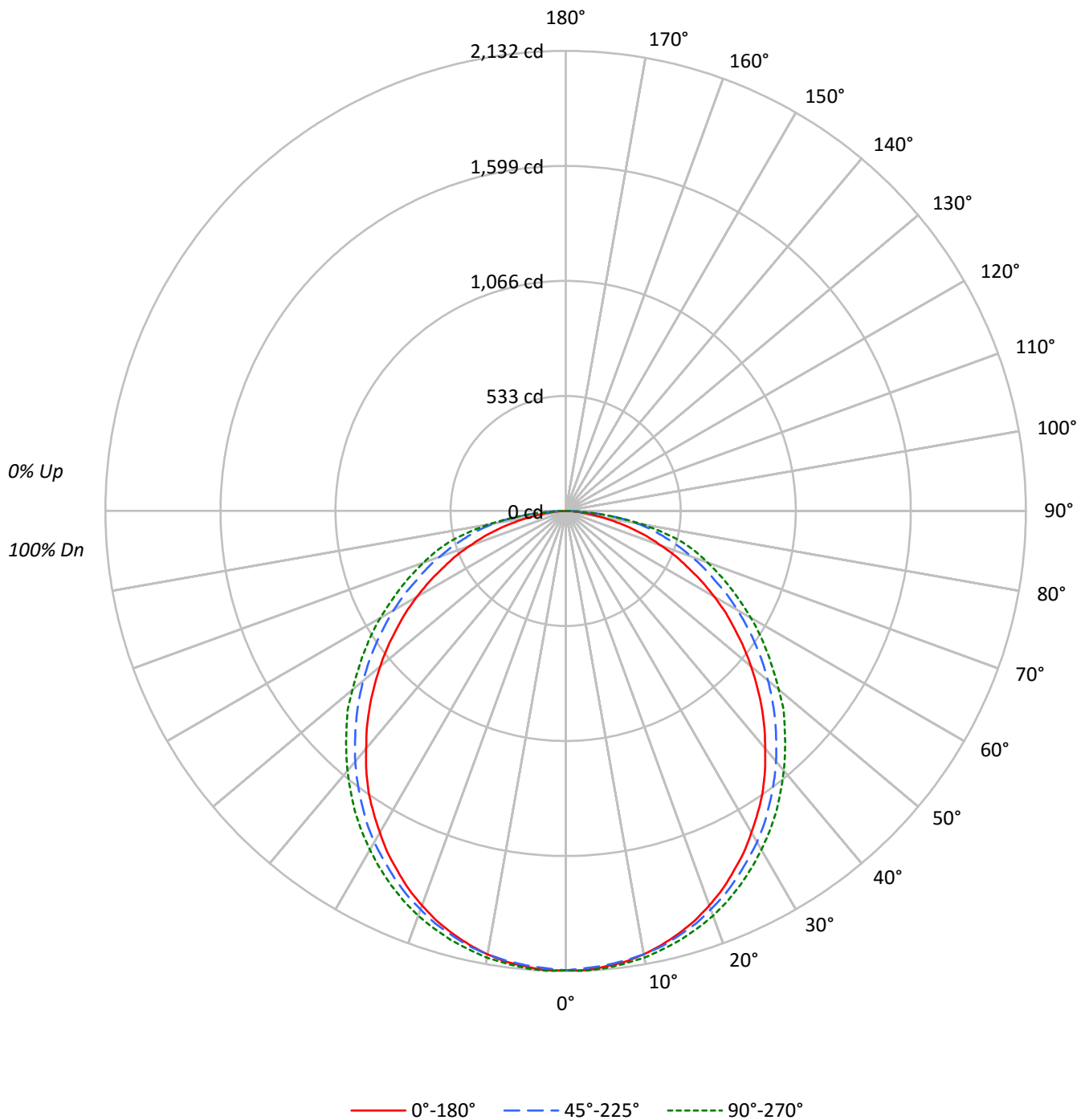
Input Watts (W): 54.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2864	2864	2864
5°	2862	2854	2872
10°	2850	2850	2871
15°	2823	2836	2866
20°	2786	2814	2858
25°	2734	2786	2840
30°	2673	2754	2817
35°	2614	2709	2794
40°	2525	2664	2762
45°	2443	2611	2732
50°	2349	2562	2699
55°	2244	2515	2673
60°	2139	2475	2667
65°	2004	2433	2684
70°	1855	2445	2756
75°	1661	2491	2911
80°	1342	2639	2848
85°	1010	2317	2259



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	201.5	3.3
10°-20°	575.8	9.5
20°-30°	865.5	14.3
30°-40°	1031.0	17.0
40°-50°	1055.2	17.4
50°-60°	950.0	15.7
60°-70°	746.0	12.3
70°-80°	484.2	8.0
80°-90°	149.7	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°	1642.9	27.1
0°-40°	2673.9	44.1
0°-60°	4679.0	77.2
0°-90°	6059.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6059.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2129	2129	2129	2129	2129	
5°	2119	2123	2113	2125	2127	201
15°	2027	2032	2036	2054	2057	571
25°	1842	1857	1876	1907	1913	848
35°	1592	1611	1649	1690	1701	993
45°	1284	1314	1372	1424	1436	990
55°	956	999	1072	1128	1139	857
65°	629	677	764	828	843	626
75°	320	381	479	545	560	338
85°	65	121	150	146	146	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2128.6	2128.6	2128.6	2128.6	2128.6
2.5°	2130.5	2130.5	2120.9	2130.5	2132.4
5°	2118.9	2122.8	2113.2	2124.7	2126.6
7.5°	2107.4	2107.4	2101.6	2113.2	2115.1
10°	2086.2	2088.2	2086.2	2099.7	2101.6
12.5°	2059.3	2063.1	2065.1	2078.5	2080.5
15°	2026.6	2032.3	2036.2	2053.5	2057.4
17.5°	1990.0	1995.8	2005.4	2024.6	2028.5
20°	1945.7	1953.4	1965.0	1990.0	1995.8
22.5°	1897.6	1905.3	1924.6	1947.7	1957.3
25°	1841.8	1857.2	1876.4	1907.2	1913.0
27.5°	1786.0	1799.5	1824.5	1857.2	1864.9
30°	1720.6	1741.7	1772.5	1805.2	1812.9
32.5°	1657.0	1678.2	1714.8	1749.4	1759.1
35°	1591.6	1610.9	1649.4	1689.8	1701.3
37.5°	1516.6	1541.6	1583.9	1624.3	1635.9
40°	1437.6	1468.4	1516.6	1558.9	1572.4
42.5°	1362.6	1395.3	1443.4	1489.6	1505.0
45°	1283.7	1314.5	1372.2	1424.2	1435.7
47.5°	1202.9	1237.5	1299.1	1351.0	1370.3
50°	1122.0	1158.6	1224.0	1277.9	1289.5
52.5°	1041.2	1079.7	1149.0	1206.7	1212.5
55°	956.5	998.8	1072.0	1127.8	1139.3
57.5°	879.5	916.1	995.0	1052.7	1066.2
60°	794.8	835.3	919.9	973.8	991.1
62.5°	714.0	756.4	844.9	898.8	914.2
65°	629.3	677.4	764.1	827.6	843.0
67.5°	556.2	602.4	694.8	756.4	771.7
70°	471.5	523.5	621.6	685.1	700.5
72.5°	398.4	452.3	550.4	612.0	635.1
75°	319.5	381.1	479.2	544.7	560.0
77.5°	242.5	313.7	413.8	463.8	463.8
80°	173.2	248.3	340.6	363.7	367.6
82.5°	113.5	186.7	252.1	250.2	250.2
85°	65.4	121.2	150.1	146.3	146.3
87.5°	25.0	50.0	53.9	53.9	52.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)