

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: P311718

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-S-CA125-W2A-U-4500K**

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: P311718
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-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 4500K 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: 6356.0 lumens
Efficiency: N/A
Efficacy: 118.6 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

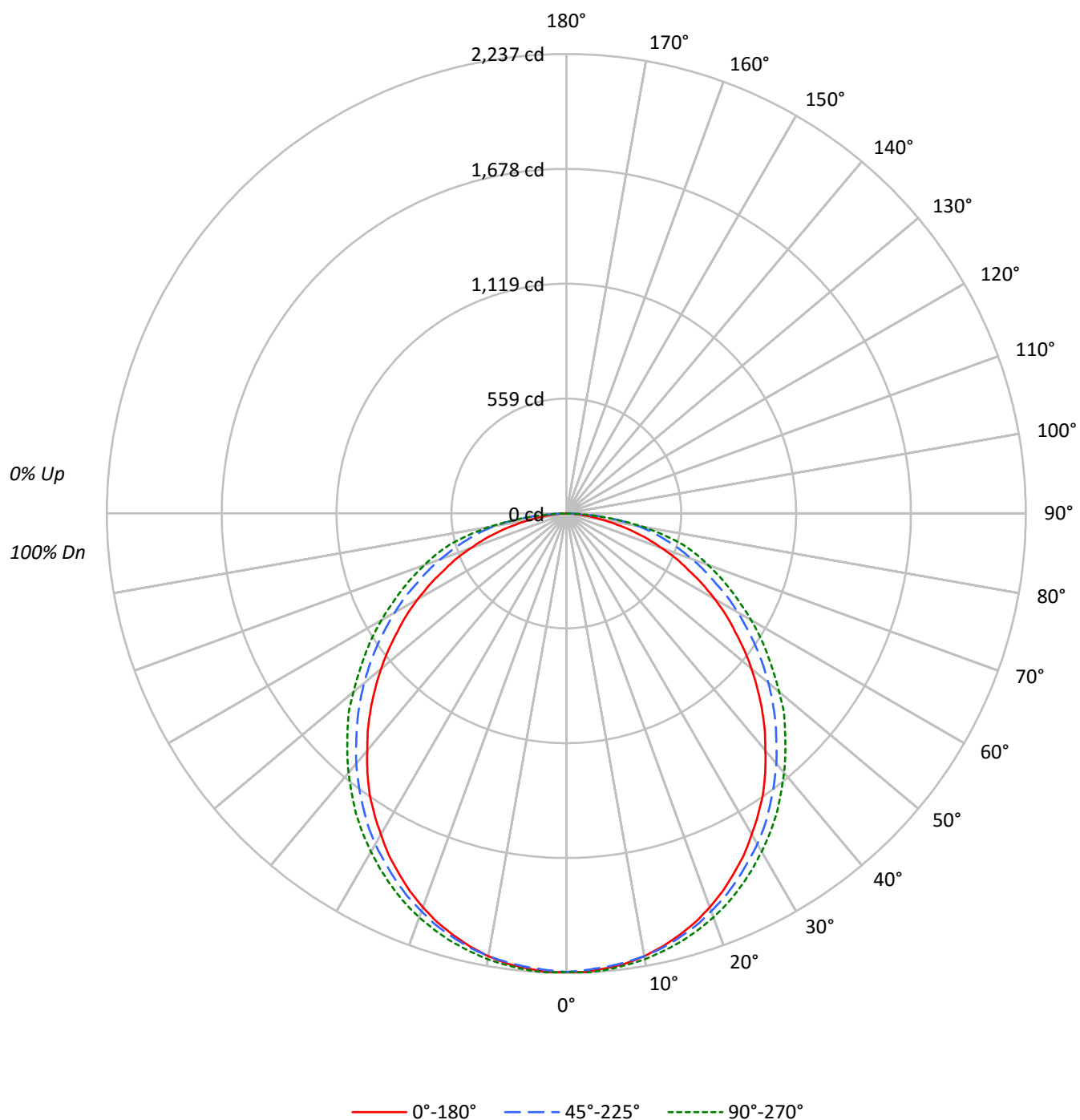
Input Watts (W): 53.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	50	30	10
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°	3004	3004	3004
5°	3002	2994	3013
10°	2990	2990	3012
15°	2961	2975	3006
20°	2923	2951	2998
25°	2868	2922	2979
30°	2804	2889	2955
35°	2742	2842	2931
40°	2649	2794	2897
45°	2562	2739	2866
50°	2464	2688	2831
55°	2354	2638	2804
60°	2244	2597	2798
65°	2102	2552	2815
70°	1946	2565	2891
75°	1742	2613	3054
80°	1408	2768	2988
85°	1059	2431	2368



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	211.4	3.3
10°-20°	604.0	9.5
20°-30°	908.0	14.3
30°-40°	1081.5	17.0
40°-50°	1106.9	17.4
50°-60°	996.5	15.7
60°-70°	782.6	12.3
70°-80°	507.9	8.0
80°-90°	157.1	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°	1723.4	27.1
0°-40°	2804.9	44.1
0°-60°	4908.4	77.2
0°-90°	6356.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6356.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2233	2233	2233	2233	2233	
5°	2223	2227	2217	2229	2231	211
15°	2126	2132	2136	2154	2158	599
25°	1932	1948	1968	2001	2007	890
35°	1670	1690	1730	1773	1785	1042
45°	1347	1379	1440	1494	1506	1038
55°	1003	1048	1124	1183	1195	900
65°	660	711	802	868	884	657
75°	335	400	503	571	588	355
85°	69	127	158	153	153	83
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2232.9	2232.9	2232.9	2232.9	2232.9
2.5°	2234.9	2234.9	2224.8	2234.9	2236.9
5°	2222.8	2226.8	2216.8	2228.9	2230.9
7.5°	2210.7	2210.7	2204.6	2216.8	2218.8
10°	2188.5	2190.5	2188.5	2202.6	2204.6
12.5°	2160.2	2164.3	2166.3	2180.4	2182.4
15°	2125.9	2132.0	2136.0	2154.2	2158.2
17.5°	2087.5	2093.6	2103.7	2123.9	2127.9
20°	2041.1	2049.2	2061.3	2087.5	2093.6
22.5°	1990.6	1998.7	2018.9	2043.1	2053.2
25°	1932.1	1948.2	1968.4	2000.7	2006.8
27.5°	1873.5	1887.7	1913.9	1948.2	1956.3
30°	1804.9	1827.1	1859.4	1893.7	1901.8
32.5°	1738.3	1760.5	1798.8	1835.2	1845.3
35°	1669.6	1689.8	1730.2	1772.6	1784.7
37.5°	1590.9	1617.1	1661.6	1704.0	1716.1
40°	1508.1	1540.4	1590.9	1635.3	1649.4
42.5°	1429.4	1463.7	1514.2	1562.6	1578.8
45°	1346.6	1378.9	1439.5	1494.0	1506.1
47.5°	1261.8	1298.2	1362.8	1417.3	1437.5
50°	1177.0	1215.4	1284.0	1340.6	1352.7
52.5°	1092.2	1132.6	1205.3	1265.9	1271.9
55°	1003.4	1047.8	1124.5	1183.1	1195.2
57.5°	922.6	961.0	1043.8	1104.3	1118.5
60°	833.8	876.2	965.0	1021.6	1039.7
62.5°	749.0	793.4	886.3	942.8	959.0
65°	660.2	710.7	801.5	868.1	884.3
67.5°	583.5	631.9	728.8	793.4	809.6
70°	494.6	549.1	652.1	718.7	734.9
72.5°	417.9	474.4	577.4	642.0	666.2
75°	335.1	399.7	502.7	571.3	587.5
77.5°	254.4	329.1	434.1	486.6	486.6
80°	181.7	260.4	357.3	381.6	385.6
82.5°	119.1	195.8	264.5	262.5	262.5
85°	68.6	127.2	157.5	153.4	153.4
87.5°	26.2	52.5	56.5	56.5	54.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)