

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: P311713

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-S-CA08-W2A-U-6500K**

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: P311713
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-CA08-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 6500K 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

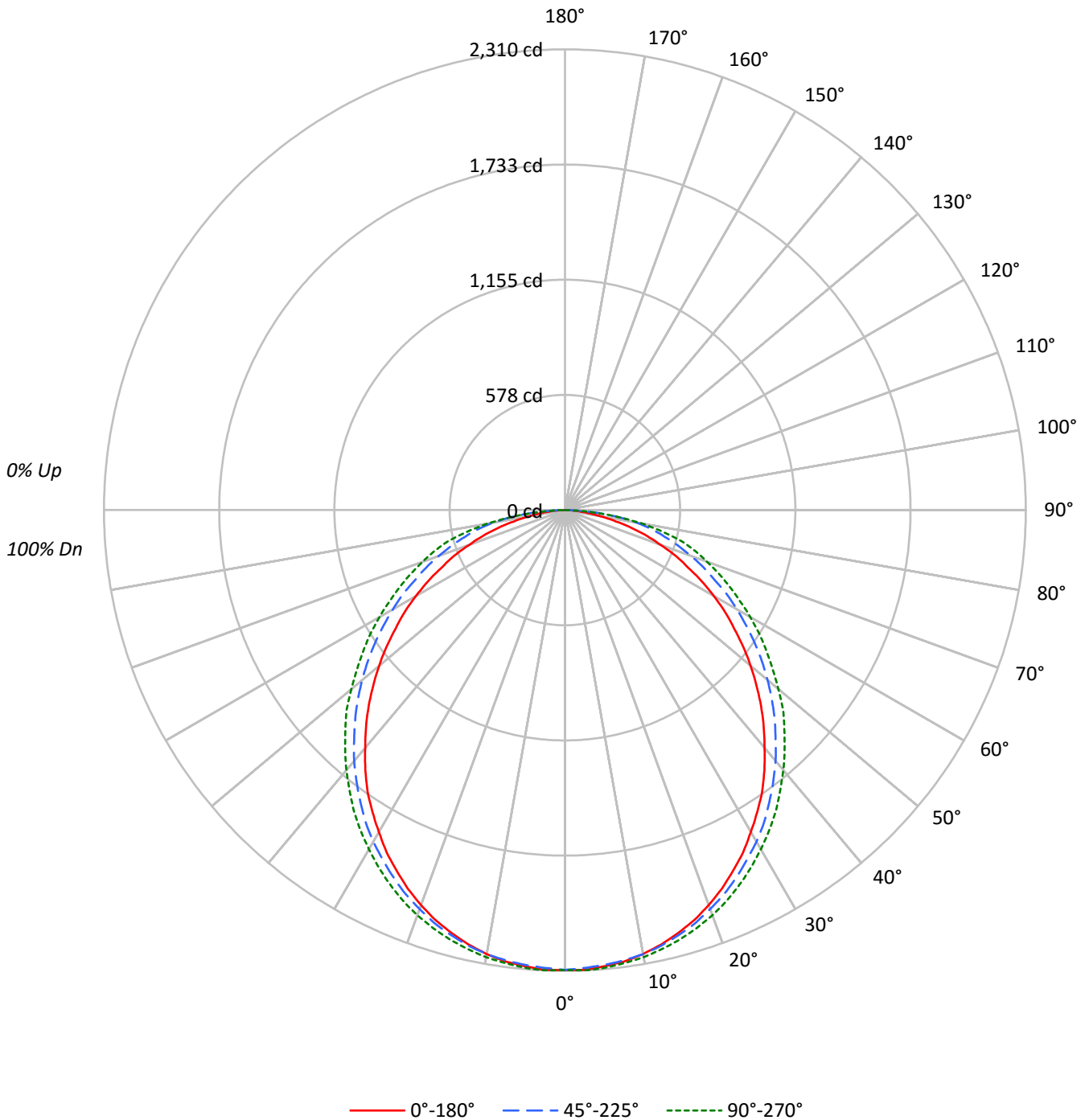
Lumens per Lamp: N/A
Luminaire Lumens: 6563.0 lumens
Efficiency: N/A
Efficacy: 119.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 54.9
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



TEST NUMBER: P311713
CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-S-CA08-W2A-U-6500K

Luminous Intensity Polar Plot





TEST NUMBER: P311713

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-S-CA08-W2A-U-6500K

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°	3102	3102	3102
5°	3100	3091	3111
10°	3087	3087	3110
15°	3058	3072	3104
20°	3018	3048	3095
25°	2962	3017	3076
30°	2896	2983	3051
35°	2832	2934	3027
40°	2735	2885	2992
45°	2646	2828	2959
50°	2544	2775	2924
55°	2430	2724	2895
60°	2317	2682	2889
65°	2170	2635	2907
70°	2009	2649	2985
75°	1799	2699	3153
80°	1454	2859	3085
85°	1095	2510	2445



TEST NUMBER: P311713

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-S-CA08-W2A-U-6500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.3	3.3
10°-20°	623.7	9.5
20°-30°	937.5	14.3
30°-40°	1116.8	17.0
40°-50°	1143.0	17.4
50°-60°	1029.0	15.7
60°-70°	808.1	12.3
70°-80°	524.5	8.0
80°-90°	162.2	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°	1779.5	27.1
0°-40°	2896.3	44.1
0°-60°	5068.2	77.2
0°-90°	6563.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6563.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2306	2306	2306	2306	2306	
5°	2295	2299	2289	2302	2304	218
15°	2195	2201	2206	2224	2228	619
25°	1995	2012	2032	2066	2072	919
35°	1724	1745	1786	1830	1843	1076
45°	1390	1424	1486	1543	1555	1072
55°	1036	1082	1161	1222	1234	929
65°	682	734	828	896	913	679
75°	346	413	519	590	607	366
85°	71	131	163	158	158	86
90°	0	0	0	0	0	



TEST NUMBER: P311713

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-S-CA08-W2A-U-6500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2305.6	2305.6	2305.6	2305.6	2305.6
2.5°	2307.7	2307.7	2297.3	2307.7	2309.8
5°	2295.2	2299.4	2288.9	2301.5	2303.5
7.5°	2282.7	2282.7	2276.4	2288.9	2291.0
10°	2259.8	2261.8	2259.8	2274.4	2276.4
12.5°	2230.6	2234.7	2236.8	2251.4	2253.5
15°	2195.1	2201.4	2205.6	2224.3	2228.5
17.5°	2155.5	2161.8	2172.2	2193.1	2197.2
20°	2107.6	2115.9	2128.4	2155.5	2161.8
22.5°	2055.5	2063.8	2084.7	2109.7	2120.1
25°	1995.0	2011.7	2032.5	2065.9	2072.1
27.5°	1934.6	1949.1	1976.2	2011.7	2020.0
30°	1863.7	1886.6	1920.0	1955.4	1963.7
32.5°	1794.9	1817.8	1857.4	1894.9	1905.4
35°	1724.0	1744.9	1786.5	1830.3	1842.8
37.5°	1642.7	1669.8	1715.7	1759.4	1772.0
40°	1557.2	1590.6	1642.7	1688.6	1703.2
42.5°	1475.9	1511.4	1563.5	1613.5	1630.2
45°	1390.5	1423.8	1486.4	1542.6	1555.2
47.5°	1302.9	1340.4	1407.1	1463.4	1484.3
50°	1215.4	1255.0	1325.8	1384.2	1396.7
52.5°	1127.8	1169.5	1244.5	1307.1	1313.3
55°	1036.1	1081.9	1161.2	1221.6	1234.1
57.5°	952.7	992.3	1077.8	1140.3	1154.9
60°	861.0	904.7	996.5	1054.8	1073.6
62.5°	773.4	819.3	915.2	973.5	990.2
65°	681.7	733.8	827.6	896.4	913.1
67.5°	602.5	652.5	752.6	819.3	835.9
70°	510.7	567.0	673.3	742.1	758.8
72.5°	431.5	489.9	596.2	662.9	687.9
75°	346.1	412.8	519.1	590.0	606.6
77.5°	262.7	339.8	448.2	502.4	502.4
80°	187.6	268.9	369.0	394.0	398.2
82.5°	123.0	202.2	273.1	271.0	271.0
85°	70.9	131.3	162.6	158.4	158.4
87.5°	27.1	54.2	58.4	58.4	56.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)