

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: P311827

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-S-CP187-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: P311827
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: 24FCZ2-75HE-UNV-L82765-S-CP187-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.187" 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: 6977.0 lumens
Efficiency: N/A
Efficacy: 108.5 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

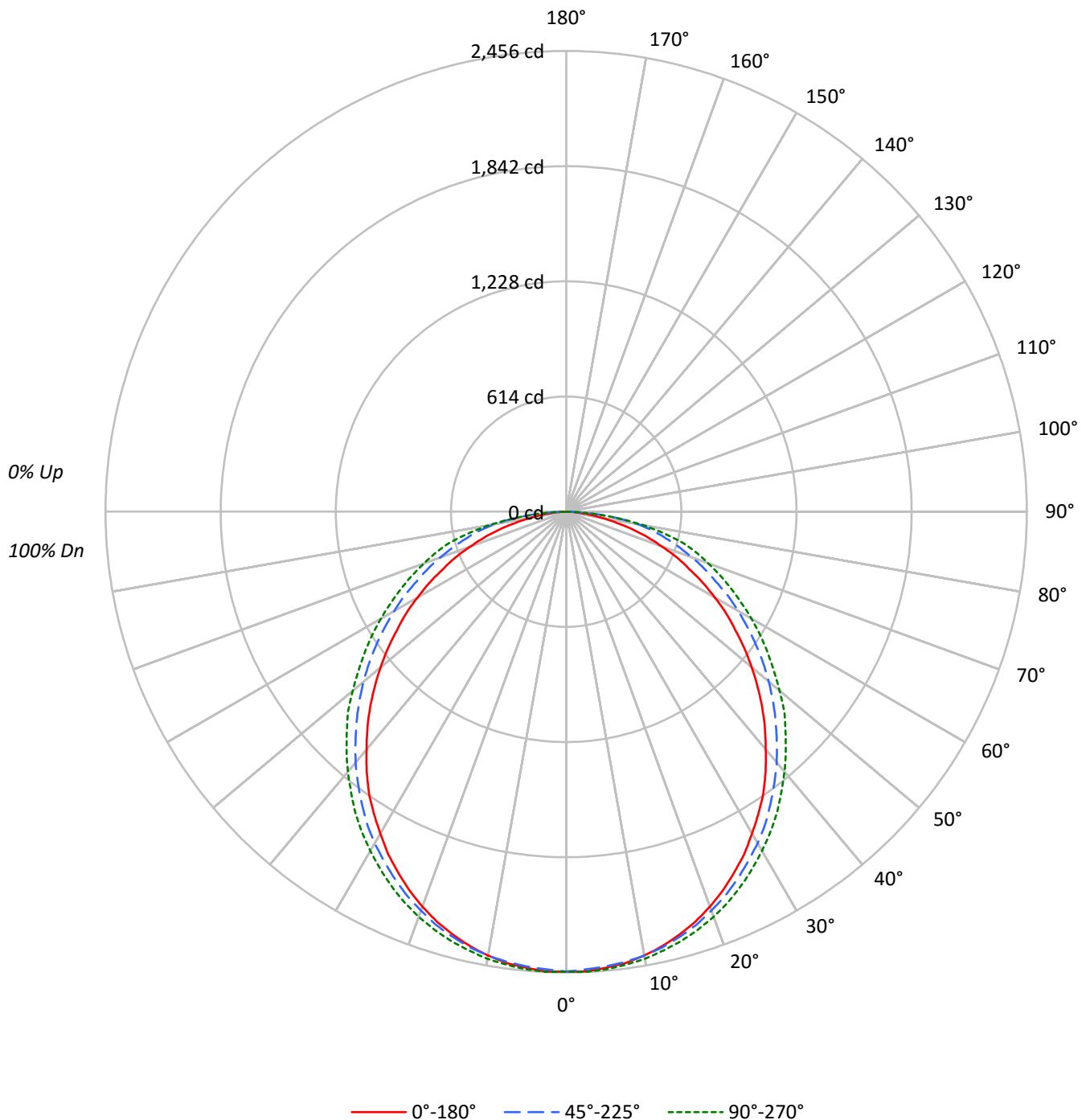
Input Watts (W): 64.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P311827

CATALOG NUMBER: 24FCZ2-75HE-UNV-L82765-S-CP187-W2A-U-5000K

Luminous Intensity Polar Plot





TEST NUMBER: P311827

CATALOG NUMBER: 24FCZ2-75HE-UNV-L82765-S-CP187-W2A-U-5000K

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°	3298	3298	3298
5°	3296	3286	3307
10°	3282	3282	3306
15°	3251	3266	3300
20°	3208	3240	3291
25°	3149	3208	3270
30°	3078	3171	3243
35°	3010	3120	3218
40°	2908	3067	3180
45°	2813	3007	3146
50°	2704	2950	3108
55°	2584	2896	3078
60°	2463	2851	3071
65°	2307	2801	3090
70°	2136	2816	3174
75°	1913	2869	3353
80°	1546	3040	3280
85°	1162	2669	2600



TEST NUMBER: P311827

CATALOG NUMBER: 24FCZ2-75HE-UNV-L82765-S-CP187-W2A-U-5000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	232.0	3.3
10°-20°	663.0	9.5
20°-30°	996.7	14.3
30°-40°	1187.2	17.0
40°-50°	1215.1	17.4
50°-60°	1093.9	15.7
60°-70°	859.1	12.3
70°-80°	557.6	8.0
80°-90°	172.4	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°	1891.8	27.1
0°-40°	3079.0	44.1
0°-60°	5387.9	77.2
0°-90°	6977.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6977.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2451	2451	2451	2451	2451	
5°	2440	2444	2433	2447	2449	232
15°	2334	2340	2345	2365	2369	658
25°	2121	2139	2161	2196	2203	977
35°	1833	1855	1899	1946	1959	1143
45°	1478	1514	1580	1640	1653	1140
55°	1101	1150	1234	1299	1312	987
65°	725	780	880	953	971	721
75°	368	439	552	627	645	389
85°	75	140	173	168	168	91
90°	0	0	0	0	0	



TEST NUMBER: P311827

CATALOG NUMBER: 24FCZ2-75HE-UNV-L82765-S-CP187-W2A-U-5000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2451.1	2451.1	2451.1	2451.1	2451.1
2.5°	2453.3	2453.3	2442.2	2453.3	2455.5
5°	2440.0	2444.4	2433.3	2446.6	2448.8
7.5°	2426.7	2426.7	2420.0	2433.3	2435.6
10°	2402.3	2404.5	2402.3	2417.8	2420.0
12.5°	2371.3	2375.7	2377.9	2393.4	2395.7
15°	2333.6	2340.3	2344.7	2364.6	2369.1
17.5°	2291.5	2298.2	2309.2	2331.4	2335.8
20°	2240.5	2249.4	2262.7	2291.5	2298.2
22.5°	2185.1	2194.0	2216.2	2242.7	2253.8
25°	2120.9	2138.6	2160.7	2196.2	2202.9
27.5°	2056.6	2072.1	2100.9	2138.6	2147.5
30°	1981.2	2005.6	2041.1	2078.8	2087.6
32.5°	1908.1	1932.5	1974.6	2014.5	2025.6
35°	1832.8	1854.9	1899.2	1945.8	1959.1
37.5°	1746.3	1775.1	1823.9	1870.4	1883.7
40°	1655.5	1690.9	1746.3	1795.1	1810.6
42.5°	1569.0	1606.7	1662.1	1715.3	1733.0
45°	1478.2	1513.6	1580.1	1640.0	1653.3
47.5°	1385.1	1425.0	1495.9	1555.7	1577.9
50°	1292.0	1334.1	1409.5	1471.5	1484.8
52.5°	1198.9	1243.3	1323.0	1389.5	1396.2
55°	1101.4	1150.2	1234.4	1298.7	1312.0
57.5°	1012.8	1054.9	1145.8	1212.2	1227.7
60°	915.3	961.8	1059.3	1121.4	1141.3
62.5°	822.2	870.9	972.9	1034.9	1052.7
65°	724.7	780.1	879.8	952.9	970.7
67.5°	640.5	693.7	800.0	870.9	888.7
70°	543.0	602.8	715.8	789.0	806.7
72.5°	458.7	520.8	633.8	704.7	731.3
75°	367.9	438.8	551.8	627.2	644.9
77.5°	279.2	361.2	476.5	534.1	534.1
80°	199.5	285.9	392.3	418.9	423.3
82.5°	130.8	215.0	290.3	288.1	288.1
85°	75.3	139.6	172.9	168.4	168.4
87.5°	28.8	57.6	62.1	62.1	59.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)