

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: P311155

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-CP187-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: P311155
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-CP187-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB 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: 6741.0 lumens
Efficiency: N/A
Efficacy: 102.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

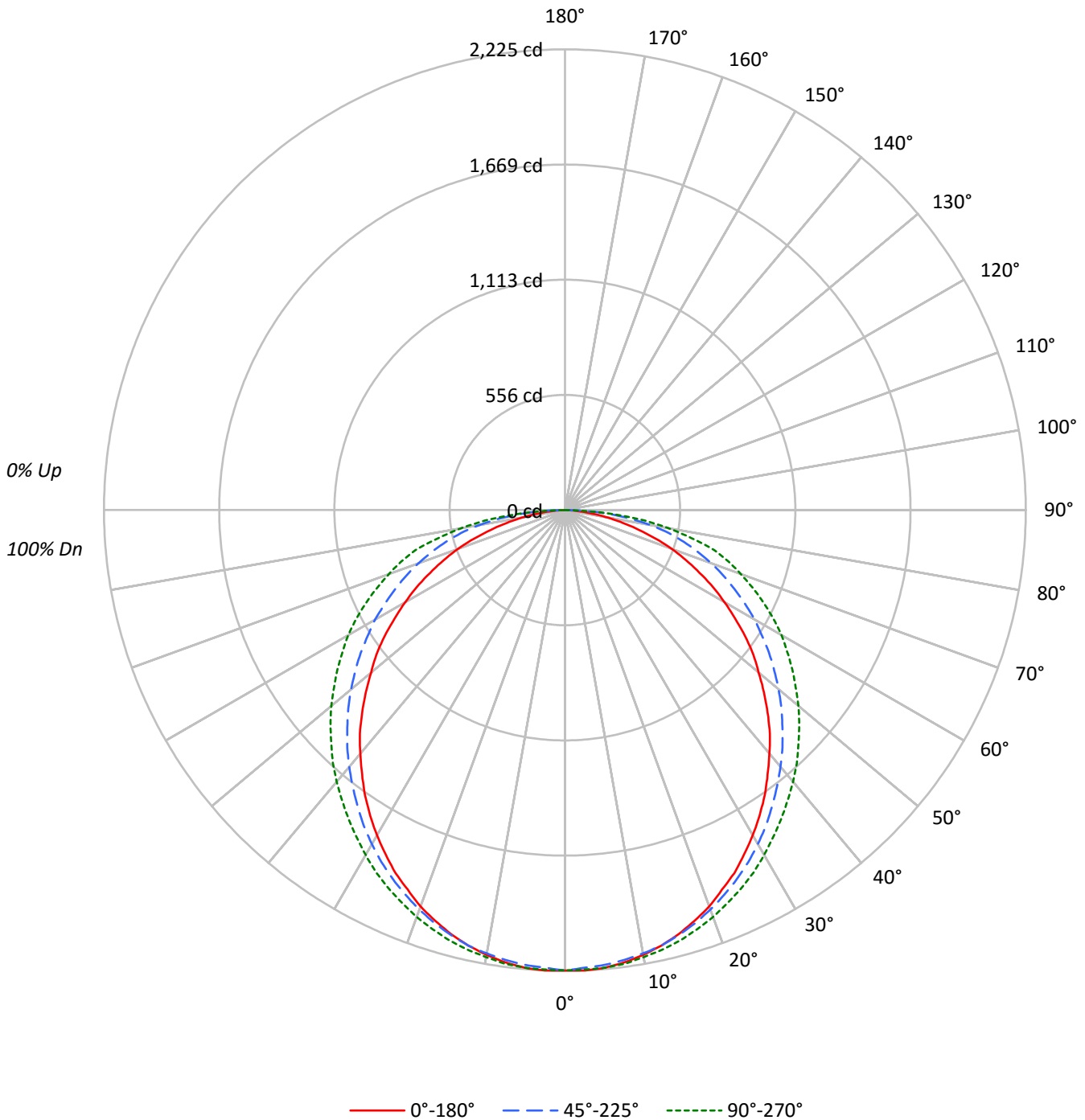
Input Watts (W): 65.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2991	2991	2991
5°	2997	2978	2997
10°	2979	2970	2995
15°	2953	2960	2997
20°	2917	2940	2994
25°	2872	2919	2992
30°	2818	2894	2988
35°	2763	2865	2990
40°	2699	2844	3009
45°	2634	2826	3034
50°	2556	2818	3080
55°	2492	2823	3143
60°	2395	2847	3250
65°	2286	2877	3368
70°	2164	2965	3555
75°	1930	3093	3883
80°	1647	3275	3969
85°	1173	3245	3798



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	210.4	3.1
10°-20°	601.6	8.9
20°-30°	908.6	13.5
30°-40°	1095.1	16.2
40°-50°	1149.7	17.1
50°-60°	1075.6	16.0
60°-70°	888.2	13.2
70°-80°	605.3	9.0
80°-90°	206.4	3.1
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°	1720.6	25.5
0°-40°	2815.8	41.8
0°-60°	5041.1	74.8
0°-90°	6741.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6741.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2223	2223	2223	2223	2223	
5°	2219	2216	2205	2219	2219	211
15°	2120	2122	2125	2147	2152	598
25°	1935	1944	1966	2004	2015	890
35°	1682	1700	1744	1803	1820	1051
45°	1384	1414	1485	1566	1595	1068
55°	1062	1105	1203	1302	1340	948
65°	718	778	904	1018	1058	712
75°	371	456	595	707	747	396
85°	76	150	210	237	246	95
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2223.1	2223.1	2223.1	2223.1	2223.1
2.5°	2225.4	2223.1	2211.9	2223.1	2220.9
5°	2218.7	2216.4	2205.2	2218.7	2218.7
7.5°	2203.0	2203.0	2191.8	2207.5	2209.7
10°	2180.6	2180.6	2173.9	2191.8	2191.8
12.5°	2153.8	2153.8	2153.8	2171.7	2173.9
15°	2120.2	2122.5	2124.7	2147.1	2151.6
17.5°	2080.0	2084.5	2091.2	2118.0	2122.5
20°	2037.5	2042.0	2053.1	2084.5	2091.2
22.5°	1983.8	1995.0	2010.7	2046.4	2053.1
25°	1934.6	1943.6	1965.9	2003.9	2015.1
27.5°	1874.2	1887.6	1916.7	1957.0	1972.6
30°	1813.8	1827.3	1863.0	1910.0	1923.4
32.5°	1749.0	1769.1	1807.1	1856.3	1872.0
35°	1681.9	1699.8	1744.5	1802.7	1820.5
37.5°	1608.1	1632.7	1681.9	1744.5	1766.9
40°	1536.5	1563.3	1619.3	1686.4	1713.2
42.5°	1464.9	1491.8	1554.4	1630.4	1657.3
45°	1384.4	1413.5	1485.1	1565.6	1594.7
47.5°	1303.9	1339.7	1418.0	1503.0	1534.3
50°	1221.2	1261.4	1346.4	1435.9	1471.6
52.5°	1147.3	1185.4	1274.8	1371.0	1404.5
55°	1062.4	1104.9	1203.3	1301.7	1339.7
57.5°	975.1	1022.1	1127.2	1234.6	1272.6
60°	890.1	941.6	1057.9	1165.2	1207.7
62.5°	807.4	858.8	979.6	1091.4	1133.9
65°	717.9	778.3	903.6	1017.6	1057.9
67.5°	632.9	697.8	829.8	941.6	981.8
70°	550.2	612.8	753.7	863.3	903.6
72.5°	460.7	532.3	673.2	787.3	829.8
75°	371.3	456.3	594.9	706.7	747.0
77.5°	288.5	375.7	514.4	606.1	626.2
80°	212.5	301.9	422.7	487.6	512.2
82.5°	136.4	225.9	322.1	369.0	389.2
85°	76.0	149.8	210.2	237.1	246.0
87.5°	31.3	64.9	85.0	96.2	96.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)