

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: P309804

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-HRP-CP187-W2A-U-5700K**

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: P309804
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
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-HRP-CP187-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (336) 5700K 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: 5100.0 lumens
Efficiency: N/A
Efficacy: 78.9 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

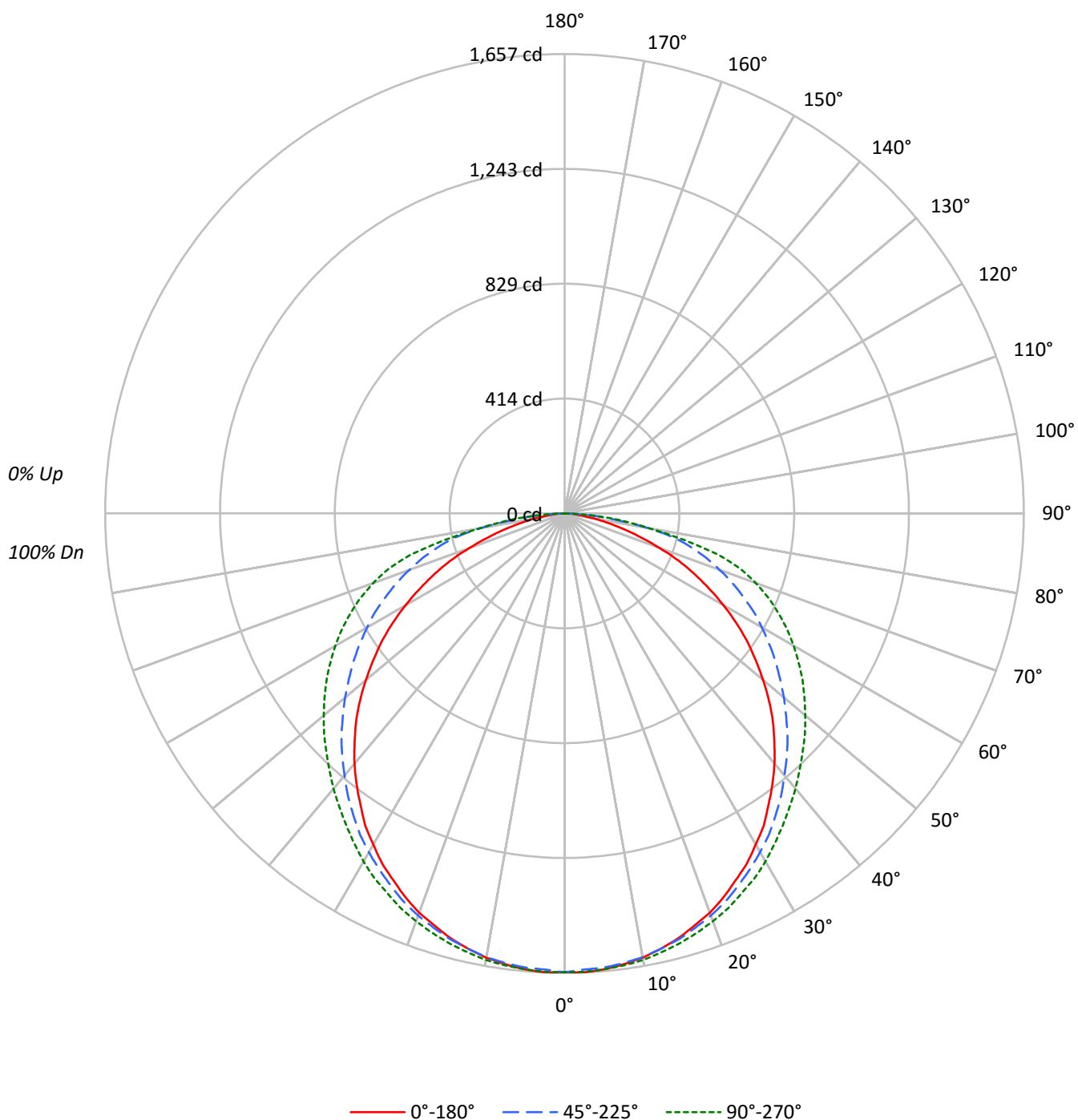
Input Watts (W): 64.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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		0
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		100
1	108	103	98	94	105	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2226	2226	2226
5°	2229	2220	2229
10°	2223	2220	2234
15°	2210	2216	2237
20°	2195	2210	2241
25°	2168	2200	2244
30°	2143	2193	2252
35°	2108	2181	2255
40°	2070	2168	2276
45°	2023	2165	2312
50°	1958	2163	2373
55°	1888	2179	2459
60°	1781	2212	2568
65°	1645	2264	2712
70°	1436	2343	2889
75°	1166	2464	2986
80°	860	2415	2415
85°	659	1780	2010



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.7	3.1
10°-20°	450.1	8.8
20°-30°	685.3	13.4
30°-40°	832.1	16.3
40°-50°	879.1	17.2
50°-60°	829.5	16.3
60°-70°	689.7	13.5
70°-80°	453.8	8.9
80°-90°	123.7	2.4
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°	1292.2	25.3
0°-40°	2124.2	41.7
0°-60°	3832.8	75.2
0°-90°	5100.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5100.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1655	1655	1655	1655	1655	
5°	1650	1650	1644	1650	1650	157
15°	1586	1588	1591	1606	1606	447
25°	1460	1469	1482	1507	1512	674
35°	1283	1298	1328	1362	1373	803
45°	1063	1085	1138	1194	1215	819
55°	805	839	929	1016	1048	717
65°	517	576	711	816	852	511
75°	224	327	474	562	574	242
85°	43	94	115	128	130	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1654.7	1654.7	1654.7	1654.7	1654.7
2.5°	1656.8	1654.7	1646.2	1654.7	1654.7
5°	1650.4	1650.4	1644.0	1650.4	1650.4
7.5°	1639.8	1639.8	1635.5	1644.0	1644.0
10°	1626.9	1626.9	1624.8	1635.5	1635.5
12.5°	1607.7	1609.9	1607.7	1620.5	1620.5
15°	1586.4	1588.5	1590.6	1605.6	1605.6
17.5°	1558.6	1562.9	1567.2	1584.2	1586.4
20°	1533.0	1535.1	1543.7	1562.9	1565.0
22.5°	1498.8	1505.2	1515.9	1535.1	1541.5
25°	1460.4	1468.9	1481.8	1507.4	1511.6
27.5°	1424.1	1430.5	1447.6	1475.4	1483.9
30°	1379.3	1389.9	1411.3	1439.1	1449.7
32.5°	1336.6	1347.2	1372.9	1402.8	1411.3
35°	1283.2	1298.1	1328.0	1362.2	1372.9
37.5°	1232.0	1246.9	1283.2	1321.6	1334.4
40°	1178.6	1195.7	1234.1	1278.9	1296.0
42.5°	1120.9	1144.4	1187.1	1236.2	1255.4
45°	1063.3	1084.6	1138.0	1193.5	1214.9
47.5°	1001.4	1027.0	1084.6	1150.8	1176.4
50°	935.2	967.2	1033.4	1106.0	1133.7
52.5°	869.0	905.3	980.0	1061.1	1091.0
55°	804.9	839.1	928.8	1016.3	1048.3
57.5°	734.5	777.2	875.4	969.3	1001.4
60°	661.9	708.9	822.0	920.2	954.4
62.5°	589.3	642.7	770.8	869.0	905.3
65°	516.7	576.5	711.0	815.6	851.9
67.5°	446.2	512.4	655.5	760.1	796.4
70°	365.1	448.4	595.7	698.2	734.5
72.5°	290.4	386.5	538.0	634.1	666.1
75°	224.2	326.7	474.0	561.5	574.3
77.5°	164.4	266.9	407.8	437.7	439.8
80°	111.0	213.5	311.7	307.5	311.7
82.5°	72.6	160.1	196.4	219.9	222.0
85°	42.7	93.9	115.3	128.1	130.2
87.5°	21.4	32.0	40.6	42.7	47.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)