

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: P310772

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-CA125-W2A-U-4000K**

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: P310772
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: 24FCZ2-45HE-UNV-L82765-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 4000K 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: 4079.0 lumens
Efficiency: N/A
Efficacy: 119.3 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

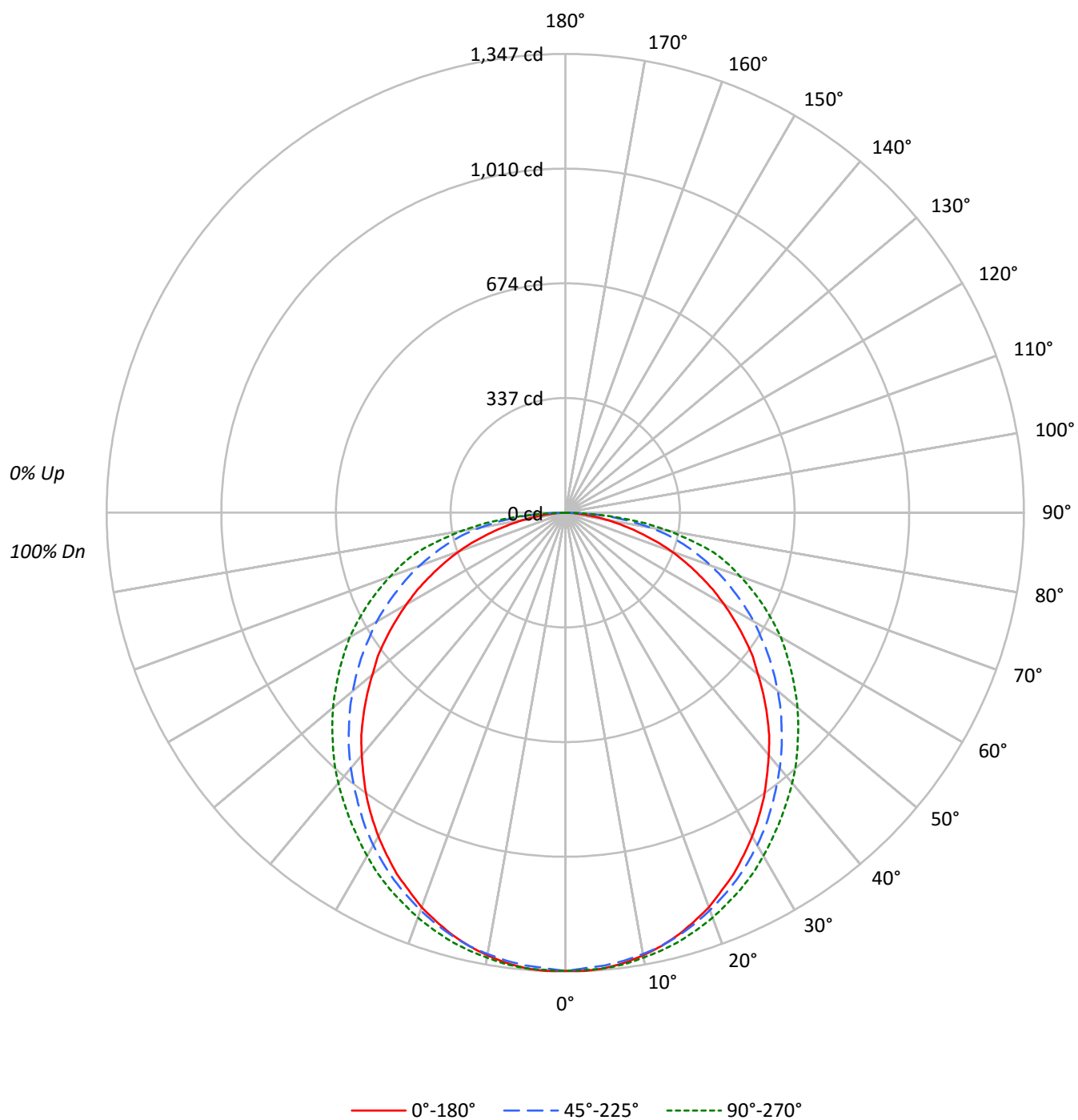
Input Watts (W): 34.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	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	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1810	1810	1810
5°	1813	1802	1813
10°	1803	1797	1812
15°	1787	1791	1813
20°	1765	1779	1812
25°	1738	1766	1810
30°	1705	1751	1808
35°	1672	1734	1809
40°	1633	1721	1821
45°	1594	1710	1836
50°	1547	1705	1864
55°	1508	1708	1901
60°	1449	1722	1967
65°	1383	1741	2038
70°	1310	1794	2151
75°	1168	1871	2350
80°	996	1982	2401
85°	710	1964	2299



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.3	3.1
10°-20°	364.0	8.9
20°-30°	549.8	13.5
30°-40°	662.7	16.2
40°-50°	695.7	17.1
50°-60°	650.8	16.0
60°-70°	537.5	13.2
70°-80°	366.3	9.0
80°-90°	124.9	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°	1041.2	25.5
0°-40°	1703.8	41.8
0°-60°	3050.3	74.8
0°-90°	4079.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4079.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1345	1345	1345	1345	1345	
5°	1342	1341	1334	1342	1342	127
15°	1283	1284	1286	1299	1302	362
25°	1171	1176	1190	1213	1219	539
35°	1018	1028	1056	1091	1102	636
45°	838	855	899	947	965	646
55°	643	668	728	788	811	574
65°	434	471	547	616	640	431
75°	225	276	360	428	452	240
85°	46	91	127	144	149	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1345.2	1345.2	1345.2	1345.2	1345.2
2.5°	1346.6	1345.2	1338.5	1345.2	1343.9
5°	1342.5	1341.2	1334.4	1342.5	1342.5
7.5°	1333.0	1333.0	1326.3	1335.7	1337.1
10°	1319.5	1319.5	1315.4	1326.3	1326.3
12.5°	1303.3	1303.3	1303.3	1314.1	1315.4
15°	1283.0	1284.3	1285.7	1299.2	1301.9
17.5°	1258.6	1261.3	1265.4	1281.6	1284.3
20°	1232.9	1235.6	1242.4	1261.3	1265.4
22.5°	1200.4	1207.2	1216.7	1238.3	1242.4
25°	1170.6	1176.1	1189.6	1212.6	1219.4
27.5°	1134.1	1142.2	1159.8	1184.2	1193.6
30°	1097.6	1105.7	1127.3	1155.8	1163.9
32.5°	1058.3	1070.5	1093.5	1123.3	1132.7
35°	1017.7	1028.5	1055.6	1090.8	1101.6
37.5°	973.1	987.9	1017.7	1055.6	1069.1
40°	929.7	946.0	979.8	1020.4	1036.7
42.5°	886.4	902.7	940.6	986.6	1002.8
45°	837.7	855.3	898.6	947.3	964.9
47.5°	789.0	810.6	858.0	909.4	928.4
50°	738.9	763.3	814.7	868.8	890.5
52.5°	694.3	717.3	771.4	829.6	849.9
55°	642.8	668.5	728.1	787.6	810.6
57.5°	590.1	618.5	682.1	747.0	770.0
60°	538.6	569.8	640.1	705.1	730.8
62.5°	488.6	519.7	592.8	660.4	686.1
65°	434.4	471.0	546.7	615.8	640.1
67.5°	383.0	422.2	502.1	569.8	594.1
70°	332.9	370.8	456.1	522.4	546.7
72.5°	278.8	322.1	407.4	476.4	502.1
75°	224.7	276.1	360.0	427.7	452.0
77.5°	174.6	227.4	311.3	366.8	378.9
80°	128.6	182.7	255.8	295.0	309.9
82.5°	82.6	136.7	194.9	223.3	235.5
85°	46.0	90.7	127.2	143.5	148.9
87.5°	18.9	39.2	51.4	58.2	58.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)