

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: P310776

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-CA125-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: P310776
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-5700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC 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: 4260.0 lumens
Efficiency: N/A
Efficacy: 122.8 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

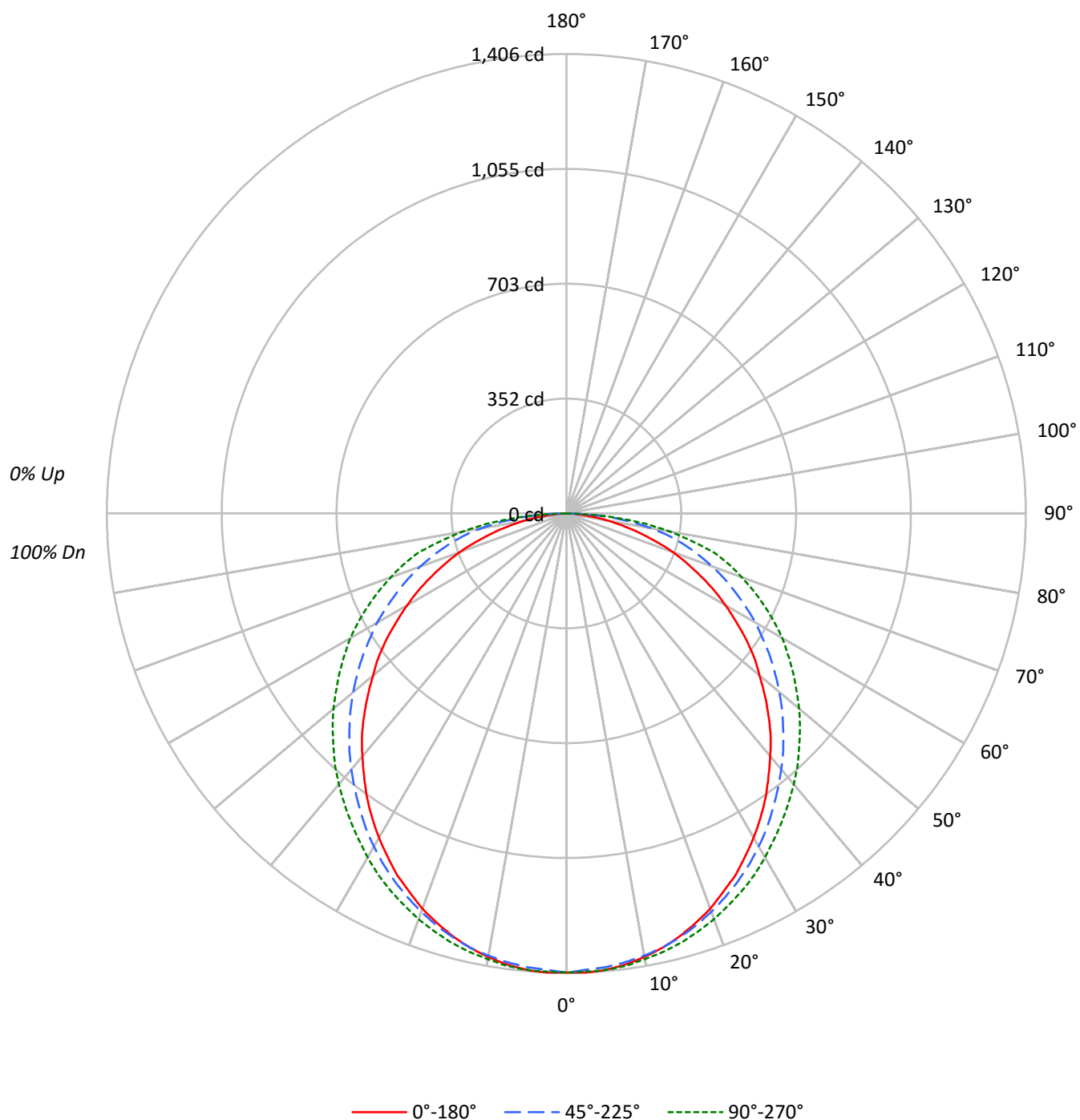
Input Watts (W): 34.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1890	1890	1890
5°	1894	1882	1894
10°	1883	1877	1892
15°	1866	1870	1894
20°	1844	1858	1892
25°	1815	1844	1891
30°	1781	1829	1888
35°	1746	1811	1890
40°	1705	1797	1902
45°	1665	1786	1917
50°	1615	1781	1947
55°	1575	1784	1986
60°	1514	1799	2054
65°	1444	1818	2128
70°	1368	1874	2246
75°	1220	1955	2454
80°	1041	2070	2508
85°	743	2052	2401



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.0	3.1
10°-20°	380.2	8.9
20°-30°	574.2	13.5
30°-40°	692.1	16.2
40°-50°	726.6	17.1
50°-60°	679.7	16.0
60°-70°	561.3	13.2
70°-80°	382.5	9.0
80°-90°	130.5	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°	1087.4	25.5
0°-40°	1779.4	41.8
0°-60°	3185.7	74.8
0°-90°	4260.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4260.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1405	1405	1405	1405	1405	
5°	1402	1401	1394	1402	1402	133
15°	1340	1341	1343	1357	1360	378
25°	1223	1228	1242	1266	1274	563
35°	1063	1074	1102	1139	1150	664
45°	875	893	938	989	1008	675
55°	671	698	760	823	847	599
65°	454	492	571	643	668	450
75°	235	288	376	447	472	250
85°	48	95	133	150	156	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1404.9	1404.9	1404.9	1404.9	1404.9
2.5°	1406.3	1404.9	1397.8	1404.9	1403.5
5°	1402.1	1400.7	1393.6	1402.1	1402.1
7.5°	1392.2	1392.2	1385.1	1395.0	1396.4
10°	1378.1	1378.1	1373.8	1385.1	1385.1
12.5°	1361.1	1361.1	1361.1	1372.4	1373.8
15°	1339.9	1341.3	1342.7	1356.9	1359.7
17.5°	1314.5	1317.3	1321.5	1338.5	1341.3
20°	1287.6	1290.4	1297.5	1317.3	1321.5
22.5°	1253.7	1260.7	1270.6	1293.3	1297.5
25°	1222.6	1228.2	1242.4	1266.4	1273.5
27.5°	1184.4	1192.9	1211.3	1236.7	1246.6
30°	1146.3	1154.7	1177.4	1207.0	1215.5
32.5°	1105.3	1118.0	1142.0	1173.1	1183.0
35°	1062.9	1074.2	1102.4	1139.2	1150.5
37.5°	1016.2	1031.8	1062.9	1102.4	1116.6
40°	971.0	988.0	1023.3	1065.7	1082.7
42.5°	925.8	942.7	982.3	1030.4	1047.3
45°	874.9	893.3	938.5	989.4	1007.7
47.5°	824.0	846.6	896.1	949.8	969.6
50°	771.7	797.2	850.9	907.4	930.0
52.5°	725.1	749.1	805.6	866.4	887.6
55°	671.4	698.2	760.4	822.6	846.6
57.5°	616.2	645.9	712.3	780.2	804.2
60°	562.5	595.0	668.5	736.4	763.2
62.5°	510.2	542.7	619.1	689.7	716.6
65°	453.7	491.9	571.0	643.1	668.5
67.5°	400.0	441.0	524.4	595.0	620.5
70°	347.7	387.3	476.3	545.6	571.0
72.5°	291.2	336.4	425.4	497.5	524.4
75°	234.6	288.3	376.0	446.6	472.1
77.5°	182.3	237.4	325.1	383.0	395.7
80°	134.3	190.8	267.1	308.1	323.7
82.5°	86.2	142.8	203.5	233.2	245.9
85°	48.1	94.7	132.9	149.8	155.5
87.5°	19.8	41.0	53.7	60.8	60.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)