

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: P310779

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-CP125-W2A-U-3000K**

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: P310779
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-CP125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 3000K 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: 3782.0 lumens
Efficiency: N/A
Efficacy: 112.6 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

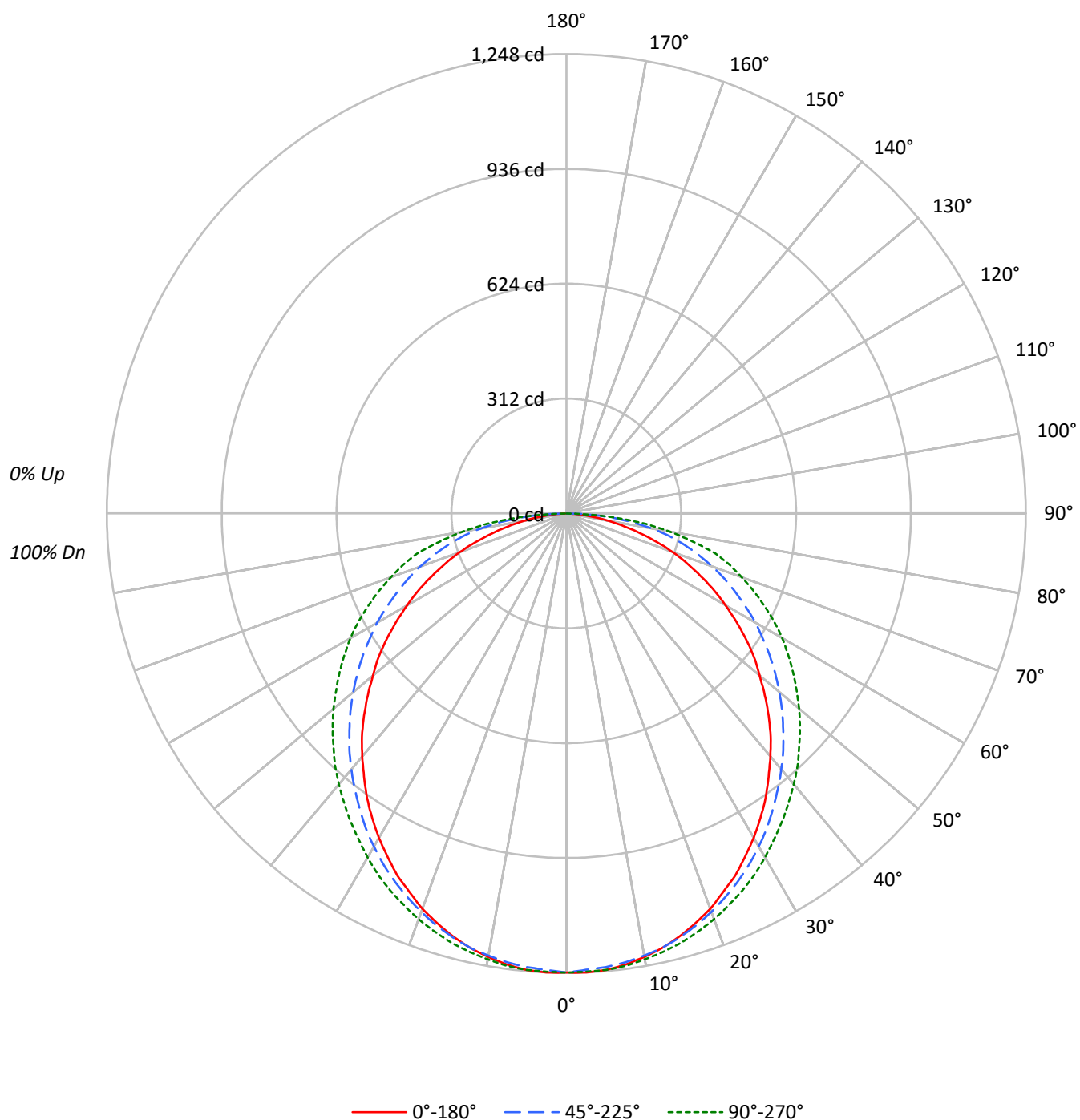
Input Watts (W): 33.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310779

CATALOG NUMBER: 24FCZ2-45HE-UNV-L82765-CP125-W2A-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P310779

CATALOG NUMBER: 24FCZ2-45HE-UNV-L82765-CP125-W2A-U-3000K

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°	1678	1678	1678
5°	1681	1671	1681
10°	1671	1666	1680
15°	1657	1661	1681
20°	1637	1649	1680
25°	1611	1637	1678
30°	1581	1624	1677
35°	1550	1608	1678
40°	1514	1596	1688
45°	1478	1585	1702
50°	1434	1581	1728
55°	1398	1584	1763
60°	1344	1597	1823
65°	1282	1614	1890
70°	1214	1664	1994
75°	1083	1735	2179
80°	924	1838	2226
85°	659	1822	2130



TEST NUMBER: P310779

CATALOG NUMBER: 24FCZ2-45HE-UNV-L82765-CP125-W2A-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.0	3.1
10°-20°	337.5	8.9
20°-30°	509.8	13.5
30°-40°	614.4	16.2
40°-50°	645.0	17.1
50°-60°	603.5	16.0
60°-70°	498.3	13.2
70°-80°	339.6	9.0
80°-90°	115.8	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°	965.4	25.5
0°-40°	1579.8	41.8
0°-60°	2828.2	74.8
0°-90°	3782.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3782.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1247	1247	1247	1247	1247	
5°	1245	1244	1237	1245	1245	118
15°	1190	1191	1192	1205	1207	335
25°	1085	1090	1103	1124	1131	499
35°	944	954	979	1011	1021	590
45°	777	793	833	878	895	599
55°	596	620	675	730	752	532
65°	403	437	507	571	594	400
75°	208	256	334	396	419	222
85°	43	84	118	133	138	53
90°	0	0	0	0	0	



TEST NUMBER: P310779

CATALOG NUMBER: 24FCZ2-45HE-UNV-L82765-CP125-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1247.3	1247.3	1247.3	1247.3	1247.3
2.5°	1248.5	1247.3	1241.0	1247.3	1246.0
5°	1244.8	1243.5	1237.2	1244.8	1244.8
7.5°	1236.0	1236.0	1229.7	1238.5	1239.7
10°	1223.4	1223.4	1219.7	1229.7	1229.7
12.5°	1208.4	1208.4	1208.4	1218.4	1219.7
15°	1189.5	1190.8	1192.1	1204.6	1207.1
17.5°	1167.0	1169.5	1173.2	1188.3	1190.8
20°	1143.1	1145.6	1151.9	1169.5	1173.2
22.5°	1113.0	1119.3	1128.1	1148.1	1151.9
25°	1085.4	1090.4	1103.0	1124.3	1130.6
27.5°	1051.5	1059.1	1075.4	1097.9	1106.7
30°	1017.6	1025.2	1045.2	1071.6	1079.1
32.5°	981.3	992.5	1013.9	1041.5	1050.3
35°	943.6	953.6	978.7	1011.4	1021.4
37.5°	902.2	916.0	943.6	978.7	991.3
40°	862.0	877.1	908.5	946.1	961.2
42.5°	821.9	837.0	872.1	914.7	929.8
45°	776.7	793.0	833.2	878.4	894.7
47.5°	731.5	751.6	795.5	843.2	860.8
50°	685.1	707.7	755.4	805.6	825.7
52.5°	643.7	665.0	715.2	769.2	788.0
55°	596.0	619.9	675.1	730.3	751.6
57.5°	547.1	573.4	632.4	692.6	714.0
60°	499.4	528.3	593.5	653.8	677.6
62.5°	453.0	481.8	549.6	612.3	636.2
65°	402.8	436.7	506.9	570.9	593.5
67.5°	355.1	391.5	465.5	528.3	550.9
70°	308.7	343.8	422.9	484.4	506.9
72.5°	258.5	298.6	377.7	441.7	465.5
75°	208.3	256.0	333.8	396.5	419.1
77.5°	161.9	210.8	288.6	340.1	351.3
80°	119.2	169.4	237.2	273.5	287.3
82.5°	76.5	126.7	180.7	207.0	218.3
85°	42.7	84.1	118.0	133.0	138.0
87.5°	17.6	36.4	47.7	54.0	54.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)