

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: P314335

Luminaire Tested: **24FCZ2-45HE-UNV-L83050-S-CP250-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: P314335
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
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-L83050-S-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" 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

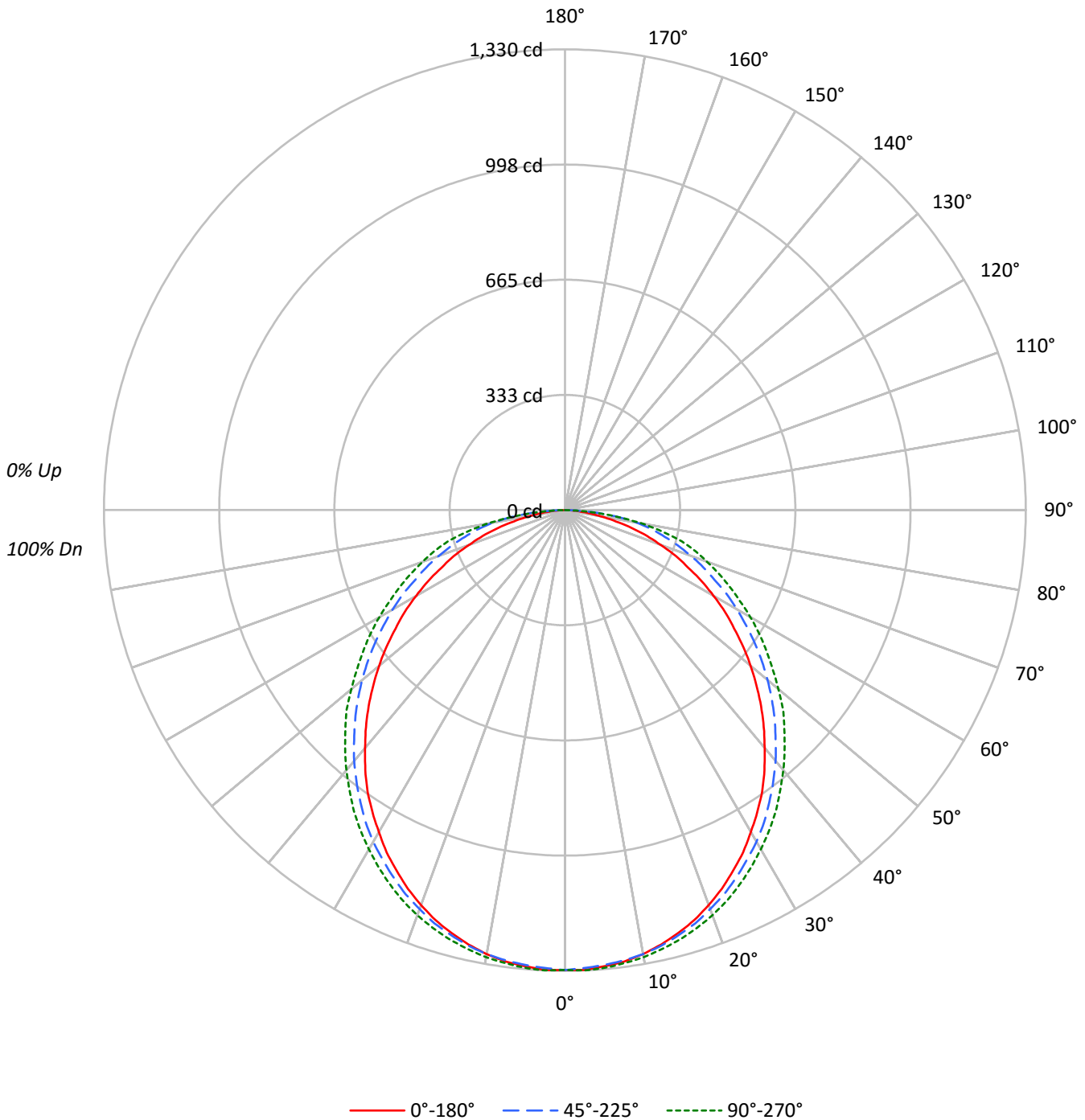
Lumens per Lamp: N/A
Luminaire Lumens: 3779.0 lumens
Efficiency: N/A
Efficacy: 112.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.7
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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1786	1786	1786
5°	1785	1780	1791
10°	1778	1778	1791
15°	1761	1769	1787
20°	1738	1755	1782
25°	1705	1737	1771
30°	1667	1718	1757
35°	1631	1690	1743
40°	1575	1661	1723
45°	1523	1628	1704
50°	1465	1598	1683
55°	1399	1568	1667
60°	1334	1544	1664
65°	1250	1517	1674
70°	1157	1525	1719
75°	1036	1554	1816
80°	837	1647	1777
85°	630	1445	1408



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.7	3.3
10°-20°	359.1	9.5
20°-30°	539.8	14.3
30°-40°	643.0	17.0
40°-50°	658.1	17.4
50°-60°	592.5	15.7
60°-70°	465.3	12.3
70°-80°	302.0	8.0
80°-90°	93.4	2.5
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°	1024.7	27.1
0°-40°	1667.7	44.1
0°-60°	2918.3	77.2
0°-90°	3779.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3779.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1328	1328	1328	1328	1328	
5°	1322	1324	1318	1325	1326	126
15°	1264	1268	1270	1281	1283	356
25°	1149	1158	1170	1190	1193	529
35°	993	1005	1029	1054	1061	619
45°	801	820	856	888	896	617
55°	597	623	669	703	711	535
65°	392	422	476	516	526	391
75°	199	238	299	340	349	211
85°	41	76	94	91	91	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1327.6	1327.6	1327.6	1327.6	1327.6
2.5°	1328.8	1328.8	1322.8	1328.8	1330.0
5°	1321.6	1324.0	1318.0	1325.2	1326.4
7.5°	1314.4	1314.4	1310.8	1318.0	1319.2
10°	1301.2	1302.4	1301.2	1309.6	1310.8
12.5°	1284.4	1286.8	1288.0	1296.4	1297.6
15°	1264.0	1267.6	1270.0	1280.8	1283.2
17.5°	1241.2	1244.8	1250.8	1262.8	1265.2
20°	1213.6	1218.4	1225.6	1241.2	1244.8
22.5°	1183.5	1188.3	1200.4	1214.8	1220.8
25°	1148.7	1158.3	1170.3	1189.5	1193.1
27.5°	1113.9	1122.3	1137.9	1158.3	1163.1
30°	1073.1	1086.3	1105.5	1125.9	1130.7
32.5°	1033.5	1046.7	1069.5	1091.1	1097.1
35°	992.7	1004.7	1028.7	1053.9	1061.1
37.5°	945.9	961.5	987.9	1013.1	1020.3
40°	896.7	915.9	945.9	972.3	980.7
42.5°	849.8	870.3	900.3	929.1	938.7
45°	800.6	819.8	855.8	888.3	895.5
47.5°	750.2	771.8	810.2	842.6	854.6
50°	699.8	722.6	763.4	797.0	804.2
52.5°	649.4	673.4	716.6	752.6	756.2
55°	596.6	623.0	668.6	703.4	710.6
57.5°	548.6	571.4	620.6	656.6	665.0
60°	495.7	521.0	573.8	607.4	618.2
62.5°	445.3	471.7	527.0	560.6	570.2
65°	392.5	422.5	476.5	516.2	525.8
67.5°	346.9	375.7	433.3	471.7	481.3
70°	294.1	326.5	387.7	427.3	436.9
72.5°	248.5	282.1	343.3	381.7	396.1
75°	199.3	237.7	298.9	339.7	349.3
77.5°	151.2	195.7	258.1	289.3	289.3
80°	108.0	154.8	212.5	226.9	229.3
82.5°	70.8	116.4	157.2	156.0	156.0
85°	40.8	75.6	93.6	91.2	91.2
87.5°	15.6	31.2	33.6	33.6	32.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)