

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: P310803

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-CP250-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: P310803
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-CP250-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" 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: 3968.0 lumens
Efficiency: N/A
Efficacy: 114.4 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

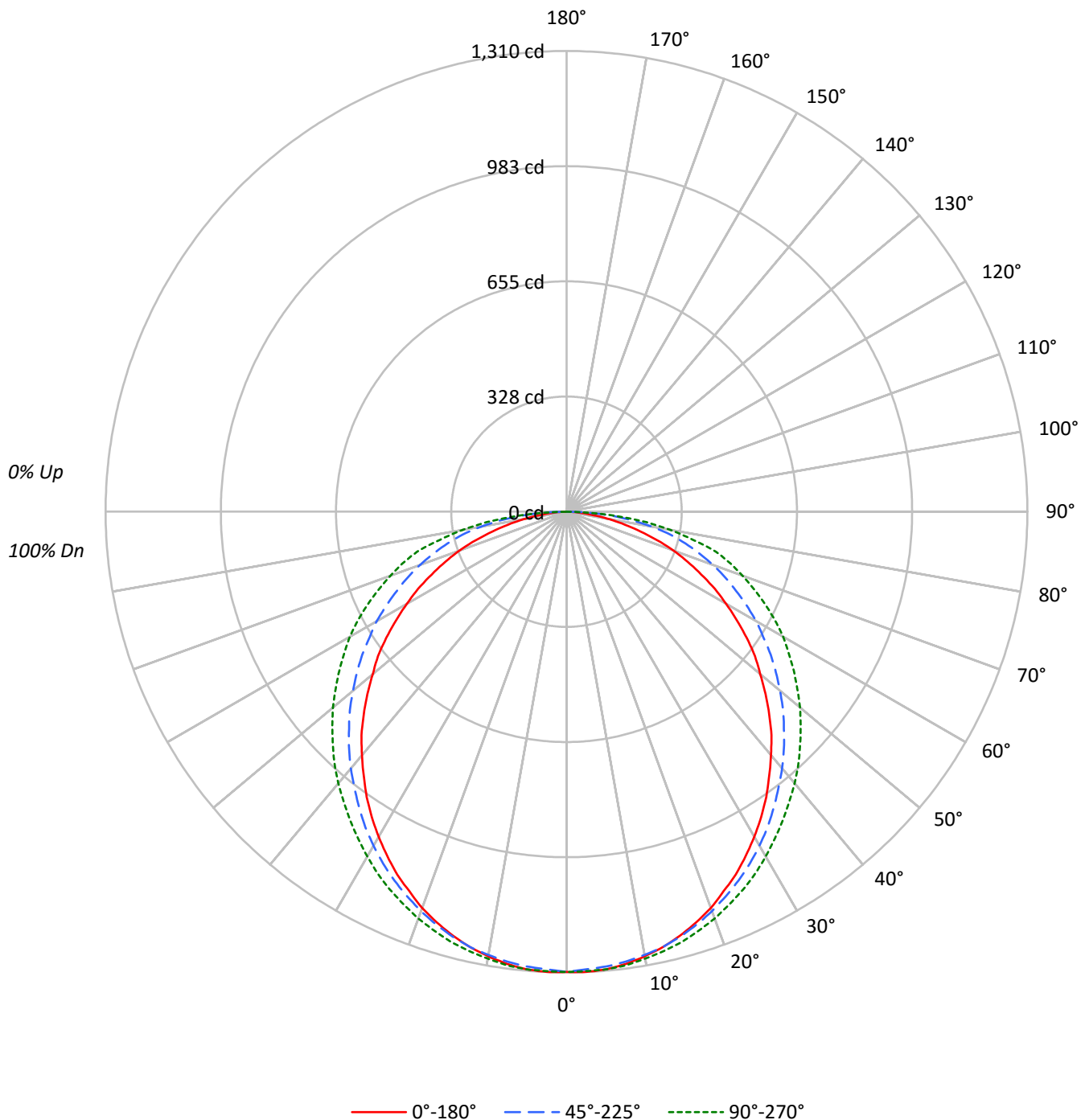
Input Watts (W): 34.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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		50	30	10
RCR																				
0	119	119	119	119	116	116	116	116		111	111	111		106	106	106		102	102	102
1	108	103	98	94	105	100	96	92		96	92	89		92	89	87		88	86	84
2	98	89	81	75	95	87	80	74		83	78	73		80	75	71		77	73	69
3	89	77	69	62	86	76	68	61		73	66	60		70	64	59		67	62	58
4	81	68	59	52	79	67	58	52		64	57	51		62	56	50		60	54	50
5	74	61	52	45	72	60	51	44		58	50	44		56	49	43		54	48	43
6	69	55	46	39	67	54	45	39		52	44	38		50	43	38		49	42	38
7	64	50	41	34	62	49	40	34		47	39	34		46	39	34		44	38	33
8	59	45	37	31	57	45	36	30		43	36	30		42	35	30		41	34	30
9	55	41	33	27	54	41	33	27		40	32	27		39	32	27		38	31	27
10	52	38	30	25	50	38	30	25		37	30	25		36	29	25		35	29	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1761	1761	1761
5°	1764	1753	1764
10°	1754	1748	1763
15°	1739	1742	1764
20°	1717	1731	1762
25°	1691	1718	1761
30°	1659	1704	1759
35°	1626	1687	1760
40°	1588	1674	1771
45°	1551	1663	1786
50°	1505	1659	1813
55°	1467	1662	1850
60°	1410	1676	1913
65°	1345	1693	1982
70°	1274	1745	2092
75°	1136	1821	2286
80°	969	1928	2336
85°	692	1911	2235



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.8	3.1
10°-20°	354.1	8.9
20°-30°	534.9	13.5
30°-40°	644.6	16.2
40°-50°	676.7	17.1
50°-60°	633.1	16.0
60°-70°	522.9	13.2
70°-80°	356.3	9.0
80°-90°	121.5	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°	1012.8	25.5
0°-40°	1657.5	41.8
0°-60°	2967.3	74.8
0°-90°	3968.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3968.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1309	1309	1309	1309	1309	
5°	1306	1305	1298	1306	1306	124
15°	1248	1249	1251	1264	1266	352
25°	1139	1144	1157	1180	1186	524
35°	990	1000	1027	1061	1072	619
45°	815	832	874	922	939	628
55°	625	650	708	766	789	558
65°	423	458	532	599	623	419
75°	218	269	350	416	440	233
85°	45	88	124	140	145	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1308.6	1308.6	1308.6	1308.6	1308.6
2.5°	1309.9	1308.6	1302.0	1308.6	1307.3
5°	1306.0	1304.7	1298.1	1306.0	1306.0
7.5°	1296.8	1296.8	1290.2	1299.4	1300.7
10°	1283.6	1283.6	1279.6	1290.2	1290.2
12.5°	1267.8	1267.8	1267.8	1278.3	1279.6
15°	1248.1	1249.4	1250.7	1263.9	1266.5
17.5°	1224.4	1227.0	1230.9	1246.7	1249.4
20°	1199.3	1202.0	1208.6	1227.0	1230.9
22.5°	1167.7	1174.3	1183.5	1204.6	1208.6
25°	1138.8	1144.0	1157.2	1179.6	1186.2
27.5°	1103.2	1111.1	1128.2	1151.9	1161.2
30°	1067.7	1075.6	1096.7	1124.3	1132.2
32.5°	1029.5	1041.4	1063.7	1092.7	1101.9
35°	990.0	1000.5	1026.9	1061.1	1071.6
37.5°	946.6	961.1	990.0	1026.9	1040.0
40°	904.4	920.2	953.2	992.6	1008.4
42.5°	862.3	878.1	915.0	959.7	975.5
45°	814.9	832.0	874.2	921.6	938.7
47.5°	767.5	788.6	834.7	884.7	903.1
50°	718.8	742.5	792.5	845.2	866.3
52.5°	675.4	697.8	750.4	807.0	826.8
55°	625.3	650.4	708.3	766.2	788.6
57.5°	574.0	601.6	663.5	726.7	749.1
60°	524.0	554.3	622.7	685.9	710.9
62.5°	475.3	505.5	576.6	642.5	667.5
65°	422.6	458.1	531.9	599.0	622.7
67.5°	372.6	410.8	488.4	554.3	577.9
70°	323.9	360.7	443.7	508.2	531.9
72.5°	271.2	313.3	396.3	463.4	488.4
75°	218.5	268.6	350.2	416.0	439.7
77.5°	169.8	221.2	302.8	356.8	368.6
80°	125.1	177.7	248.8	287.0	301.5
82.5°	80.3	133.0	189.6	217.2	229.1
85°	44.8	88.2	123.8	139.6	144.8
87.5°	18.4	38.2	50.0	56.6	56.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)