

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: P309698

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-HRP-CP125-W2A-U-2700K**

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: P309698
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-65HE-UNV-L82765-HRP-CP125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB SHEET
Light Source: (336) 2700K 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: 4064.0 lumens
Efficiency: N/A
Efficacy: 77.3 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

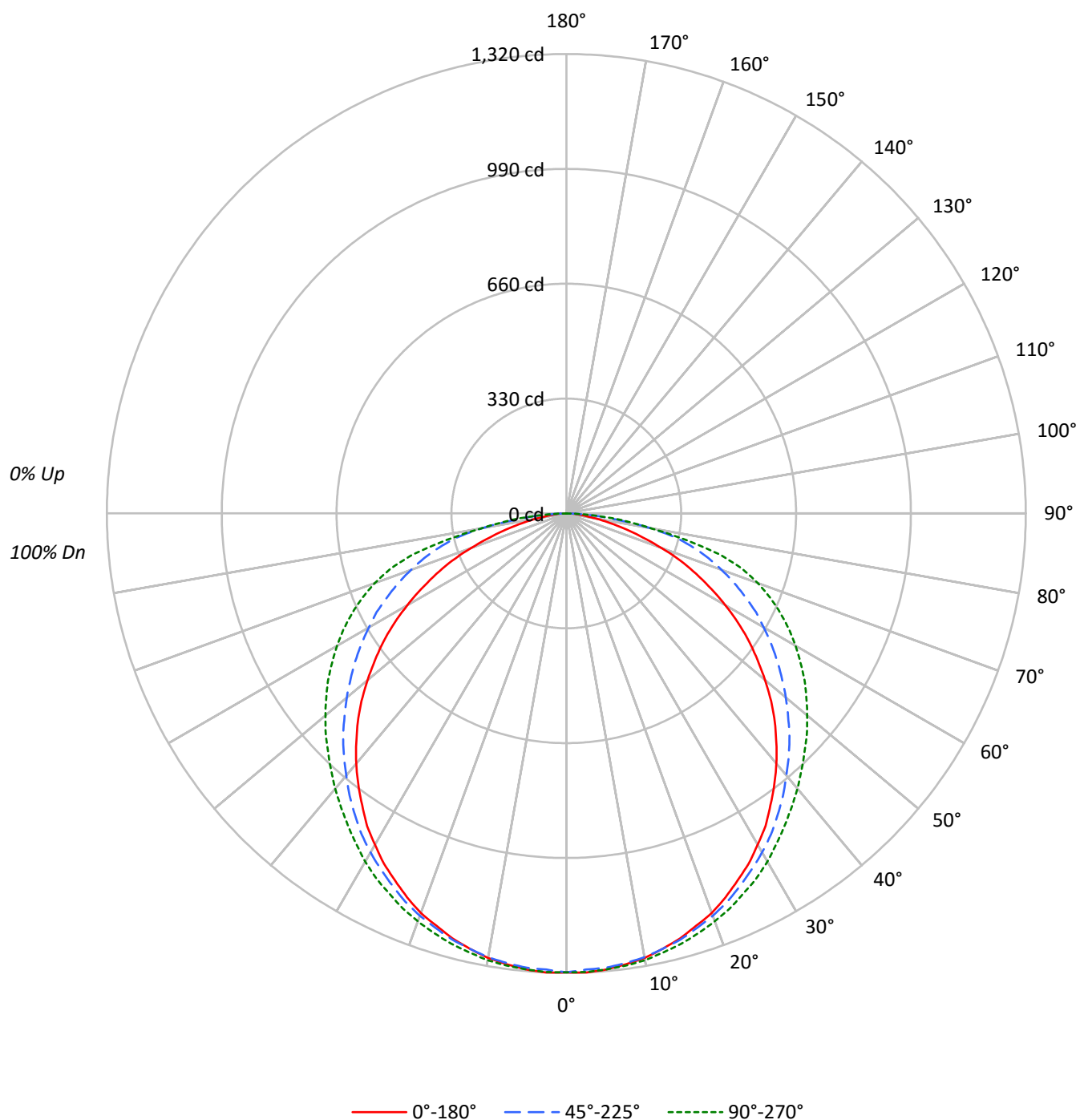
Input Watts (W): 52.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P309698

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-HRP-CP125-W2A-U-2700K

Luminous Intensity Polar Plot





TEST NUMBER: P309698

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-HRP-CP125-W2A-U-2700K

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	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82		
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67		
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56		
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48		
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41		
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36		
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31		
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28		
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25		
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1774	1774	1774
5°	1776	1769	1776
10°	1771	1769	1781
15°	1761	1766	1782
20°	1749	1761	1786
25°	1728	1753	1788
30°	1708	1747	1795
35°	1679	1738	1797
40°	1650	1727	1814
45°	1612	1725	1842
50°	1560	1724	1891
55°	1505	1736	1960
60°	1419	1763	2046
65°	1311	1804	2161
70°	1144	1867	2303
75°	928	1964	2379
80°	686	1925	1925
85°	525	1419	1602



TEST NUMBER: P309698

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-HRP-CP125-W2A-U-2700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.9	3.1
10°-20°	358.7	8.8
20°-30°	546.1	13.4
30°-40°	663.1	16.3
40°-50°	700.5	17.2
50°-60°	661.0	16.3
60°-70°	549.6	13.5
70°-80°	361.6	8.9
80°-90°	98.6	2.4
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°	1029.7	25.3
0°-40°	1692.7	41.7
0°-60°	3054.3	75.2
0°-90°	4064.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4064.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1319	1319	1319	1319	1319	
5°	1315	1315	1310	1315	1315	125
15°	1264	1266	1268	1279	1279	357
25°	1164	1170	1181	1201	1205	537
35°	1022	1034	1058	1086	1094	640
45°	847	864	907	951	968	652
55°	641	669	740	810	835	571
65°	412	459	567	650	679	407
75°	179	260	378	448	458	192
85°	34	75	92	102	104	42
90°	0	0	0	0	0	



TEST NUMBER: P309698

CATALOG NUMBER: 24FCZ2-65HE-UNV-L82765-HRP-CP125-W2A-U-2700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1318.6	1318.6	1318.6	1318.6	1318.6
2.5°	1320.3	1318.6	1311.8	1318.6	1318.6
5°	1315.2	1315.2	1310.1	1315.2	1315.2
7.5°	1306.7	1306.7	1303.3	1310.1	1310.1
10°	1296.5	1296.5	1294.7	1303.3	1303.3
12.5°	1281.1	1282.8	1281.1	1291.3	1291.3
15°	1264.1	1265.8	1267.5	1279.4	1279.4
17.5°	1242.0	1245.4	1248.8	1262.4	1264.1
20°	1221.6	1223.3	1230.1	1245.4	1247.1
22.5°	1194.4	1199.5	1208.0	1223.3	1228.4
25°	1163.7	1170.5	1180.8	1201.2	1204.6
27.5°	1134.8	1139.9	1153.5	1175.7	1182.5
30°	1099.1	1107.6	1124.6	1146.7	1155.2
32.5°	1065.1	1073.6	1094.0	1117.8	1124.6
35°	1022.5	1034.4	1058.3	1085.5	1094.0
37.5°	981.7	993.6	1022.5	1053.2	1063.4
40°	939.2	952.8	983.4	1019.1	1032.7
42.5°	893.2	911.9	946.0	985.1	1000.4
45°	847.3	864.3	906.8	951.1	968.1
47.5°	797.9	818.4	864.3	917.0	937.5
50°	745.2	770.7	823.5	881.3	903.4
52.5°	692.5	721.4	780.9	845.6	869.4
55°	641.4	668.6	740.1	809.9	835.4
57.5°	585.3	619.3	697.6	772.4	797.9
60°	527.4	564.9	655.0	733.3	760.5
62.5°	469.6	512.1	614.2	692.5	721.4
65°	411.7	459.4	566.6	649.9	678.8
67.5°	355.6	408.3	522.3	605.7	634.6
70°	290.9	357.3	474.7	556.4	585.3
72.5°	231.4	307.9	428.7	505.3	530.8
75°	178.6	260.3	377.7	447.5	457.7
77.5°	131.0	212.7	325.0	348.8	350.5
80°	88.5	170.1	248.4	245.0	248.4
82.5°	57.8	127.6	156.5	175.2	176.9
85°	34.0	74.9	91.9	102.1	103.8
87.5°	17.0	25.5	32.3	34.0	37.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)