

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: P313728

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-RDP-CP125-W2A-U-4500K**

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: P313728
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
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-L83050-RDP-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET
Light Source: (336) 4500K 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: 4162.0 lumens
Efficiency: N/A
Efficacy: 75.4 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

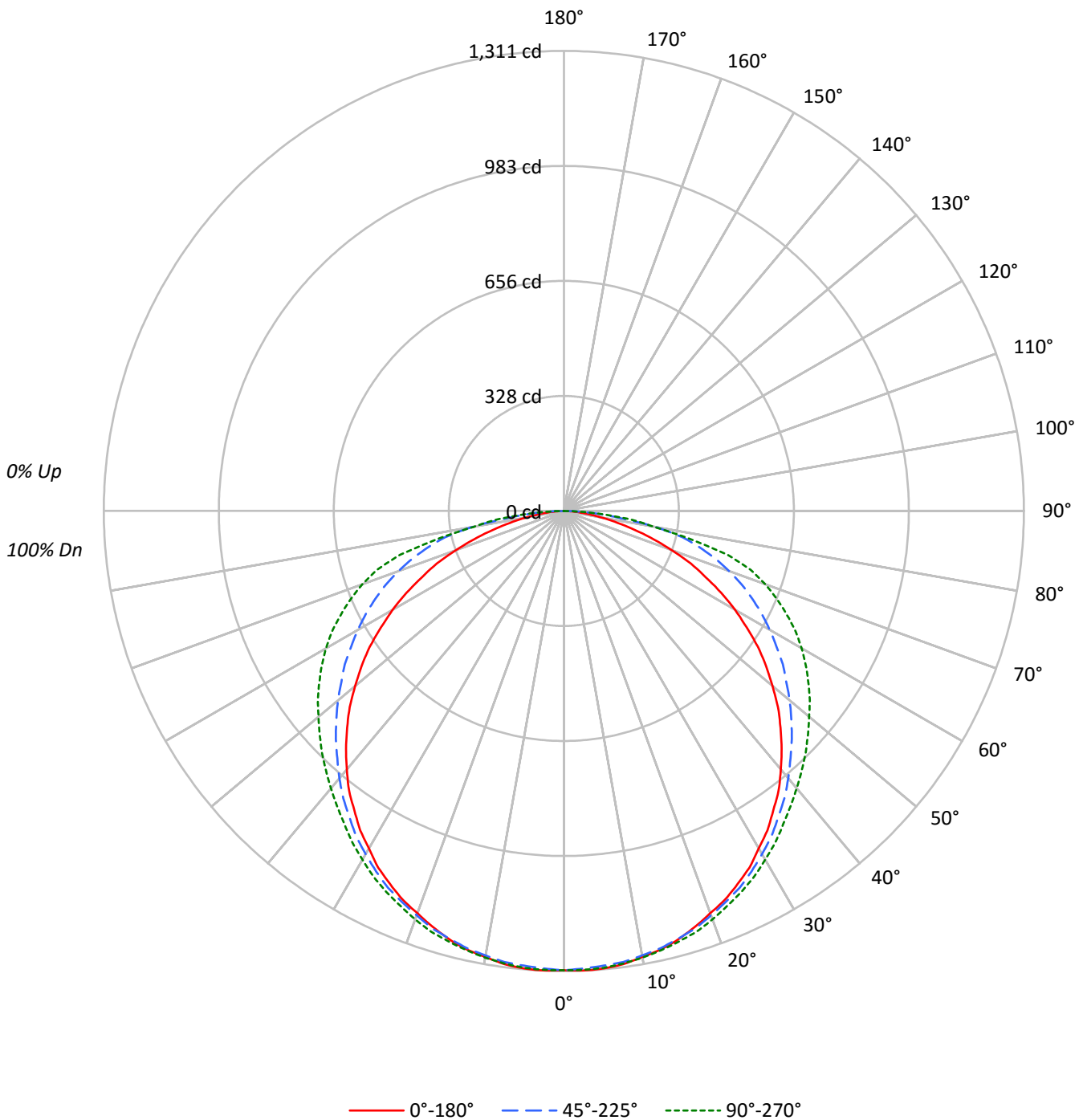
Input Watts (W): 55.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1761	1761	1761
5°	1768	1757	1765
10°	1763	1757	1766
15°	1760	1757	1768
20°	1747	1756	1773
25°	1741	1759	1778
30°	1725	1754	1783
35°	1709	1750	1790
40°	1690	1748	1813
45°	1662	1748	1854
50°	1625	1759	1910
55°	1584	1787	1995
60°	1517	1822	2105
65°	1420	1886	2235
70°	1291	1973	2404
75°	1095	2082	2511
80°	864	2095	2032
85°	638	1593	1785



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.2	3.0
10°-20°	357.3	8.6
20°-30°	546.4	13.1
30°-40°	668.0	16.0
40°-50°	711.9	17.1
50°-60°	680.7	16.4
60°-70°	576.6	13.9
70°-80°	387.6	9.3
80°-90°	109.3	2.6
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°	1027.9	24.7
0°-40°	1695.9	40.7
0°-60°	3088.5	74.2
0°-90°	4162.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4162.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1309	1309	1309	1309	1309	
5°	1309	1307	1301	1307	1307	124
15°	1263	1263	1261	1272	1270	356
25°	1173	1177	1185	1195	1197	540
35°	1040	1049	1065	1086	1090	652
45°	873	888	919	958	974	674
55°	675	700	762	822	850	601
65°	446	491	592	671	702	443
75°	211	287	400	469	483	225
85°	41	85	103	112	116	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1308.8	1308.8	1308.8	1308.8	1308.8
2.5°	1310.9	1310.9	1304.7	1308.8	1308.8
5°	1308.8	1306.8	1300.6	1306.8	1306.8
7.5°	1302.6	1300.6	1296.4	1302.6	1300.6
10°	1290.3	1290.3	1286.1	1292.3	1292.3
12.5°	1279.9	1277.9	1275.8	1284.1	1282.0
15°	1263.4	1263.4	1261.3	1271.7	1269.6
17.5°	1242.8	1244.8	1246.9	1255.2	1257.2
20°	1220.1	1224.2	1226.3	1238.6	1238.6
22.5°	1199.4	1201.5	1205.6	1218.0	1218.0
25°	1172.6	1176.7	1185.0	1195.3	1197.4
27.5°	1145.7	1147.8	1158.1	1172.6	1174.6
30°	1110.6	1116.8	1129.2	1145.7	1147.8
32.5°	1079.7	1085.9	1100.3	1116.8	1121.0
35°	1040.5	1048.7	1065.2	1085.9	1090.0
37.5°	1005.4	1011.6	1032.2	1054.9	1061.1
40°	962.0	974.4	995.0	1021.9	1032.2
42.5°	918.7	931.0	955.8	990.9	1003.3
45°	873.2	887.7	918.7	957.9	974.4
47.5°	827.8	844.3	879.4	924.9	943.4
50°	776.2	796.9	840.2	891.8	912.5
52.5°	726.7	751.4	798.9	856.7	883.6
55°	675.1	699.8	761.8	821.6	850.5
57.5°	617.3	650.3	718.4	786.5	817.5
60°	563.6	594.5	677.1	751.4	782.4
62.5°	505.8	547.1	635.8	714.3	745.2
65°	445.9	491.3	592.5	670.9	701.9
67.5°	392.2	441.8	549.1	627.6	658.5
70°	328.2	390.2	501.6	580.1	611.1
72.5°	268.4	336.5	452.1	528.5	557.4
75°	210.6	287.0	400.5	468.6	483.1
77.5°	156.9	237.4	346.8	375.7	365.4
80°	111.5	189.9	270.4	256.0	262.2
82.5°	72.3	144.5	167.2	189.9	196.1
85°	41.3	84.6	103.2	111.5	115.6
87.5°	18.6	31.0	41.3	41.3	39.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)