

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: P310950

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-CA125-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: P310950
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: 24FCZ2-55HE-UNV-L82765-CA125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC 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: 4774.0 lumens
Efficiency: N/A
Efficacy: 111.5 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

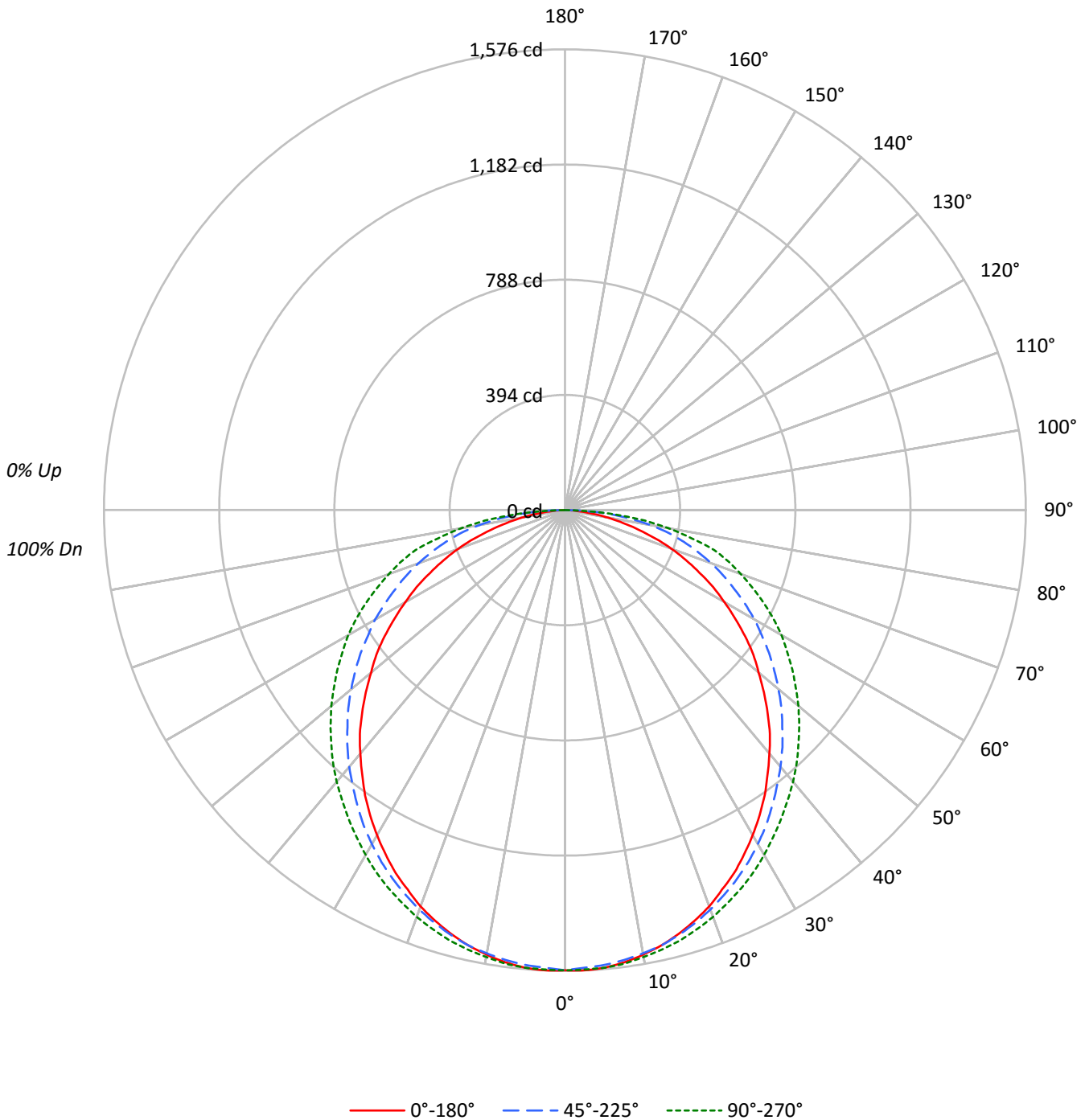
Input Watts (W): 42.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	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	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2118	2118	2118
5°	2122	2109	2122
10°	2110	2103	2121
15°	2092	2096	2122
20°	2066	2082	2121
25°	2034	2067	2119
30°	1996	2050	2116
35°	1956	2029	2118
40°	1911	2014	2131
45°	1866	2001	2149
50°	1810	1996	2182
55°	1765	1999	2226
60°	1696	2016	2302
65°	1619	2037	2385
70°	1533	2100	2517
75°	1367	2190	2750
80°	1166	2320	2810
85°	832	2299	2689



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.0	3.1
10°-20°	426.0	8.9
20°-30°	643.5	13.5
30°-40°	775.6	16.2
40°-50°	814.2	17.1
50°-60°	761.7	16.0
60°-70°	629.1	13.2
70°-80°	428.6	9.0
80°-90°	146.2	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°	1218.6	25.5
0°-40°	1994.1	41.8
0°-60°	3570.1	74.8
0°-90°	4774.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4774.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1574	1574	1574	1574	1574	
5°	1571	1570	1562	1571	1571	149
15°	1502	1503	1505	1521	1524	423
25°	1370	1376	1392	1419	1427	630
35°	1191	1204	1236	1277	1289	744
45°	980	1001	1052	1109	1129	756
55°	752	782	852	922	949	672
65°	508	551	640	721	749	504
75°	263	323	421	500	529	280
85°	54	106	149	168	174	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1574.4	1574.4	1574.4	1574.4	1574.4
2.5°	1576.0	1574.4	1566.5	1574.4	1572.8
5°	1571.3	1569.7	1561.8	1571.3	1571.3
7.5°	1560.2	1560.2	1552.2	1563.3	1564.9
10°	1544.3	1544.3	1539.6	1552.2	1552.2
12.5°	1525.3	1525.3	1525.3	1538.0	1539.6
15°	1501.6	1503.1	1504.7	1520.6	1523.7
17.5°	1473.1	1476.2	1481.0	1500.0	1503.1
20°	1443.0	1446.1	1454.0	1476.2	1481.0
22.5°	1404.9	1412.9	1424.0	1449.3	1454.0
25°	1370.1	1376.4	1392.3	1419.2	1427.1
27.5°	1327.3	1336.8	1357.4	1385.9	1397.0
30°	1284.6	1294.1	1319.4	1352.7	1362.2
32.5°	1238.6	1252.9	1279.8	1314.7	1325.7
35°	1191.1	1203.8	1235.5	1276.6	1289.3
37.5°	1138.8	1156.3	1191.1	1235.5	1251.3
40°	1088.2	1107.2	1146.8	1194.3	1213.3
42.5°	1037.5	1056.5	1100.8	1154.7	1173.7
45°	980.5	1001.0	1051.7	1108.7	1129.3
47.5°	923.4	948.8	1004.2	1064.4	1086.6
50°	864.8	893.3	953.5	1016.9	1042.2
52.5°	812.6	839.5	902.8	970.9	994.7
55°	752.4	782.5	852.2	921.8	948.8
57.5°	690.6	723.9	798.3	874.3	901.3
60°	630.4	666.8	749.2	825.2	855.3
62.5°	571.8	608.2	693.8	773.0	803.1
65°	508.4	551.2	639.9	720.7	749.2
67.5°	448.3	494.2	587.6	666.8	695.3
70°	389.6	434.0	533.8	611.4	639.9
72.5°	326.3	377.0	476.8	557.5	587.6
75°	262.9	323.1	421.3	500.5	529.0
77.5°	204.3	266.1	364.3	429.2	443.5
80°	150.5	213.8	299.4	345.3	362.7
82.5°	96.6	160.0	228.1	261.3	275.6
85°	53.9	106.1	148.9	167.9	174.2
87.5°	22.2	45.9	60.2	68.1	68.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)