

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: P311326

Luminaire Tested: **24FCZ2-35-UNV-L82765-S-CP125-W2A-U-6500K**

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: P311326
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: 24FCZ2-35-UNV-L82765-S-CP125-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (168) 6500K 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: 3490.0 lumens
Efficiency: N/A
Efficacy: 119.5 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

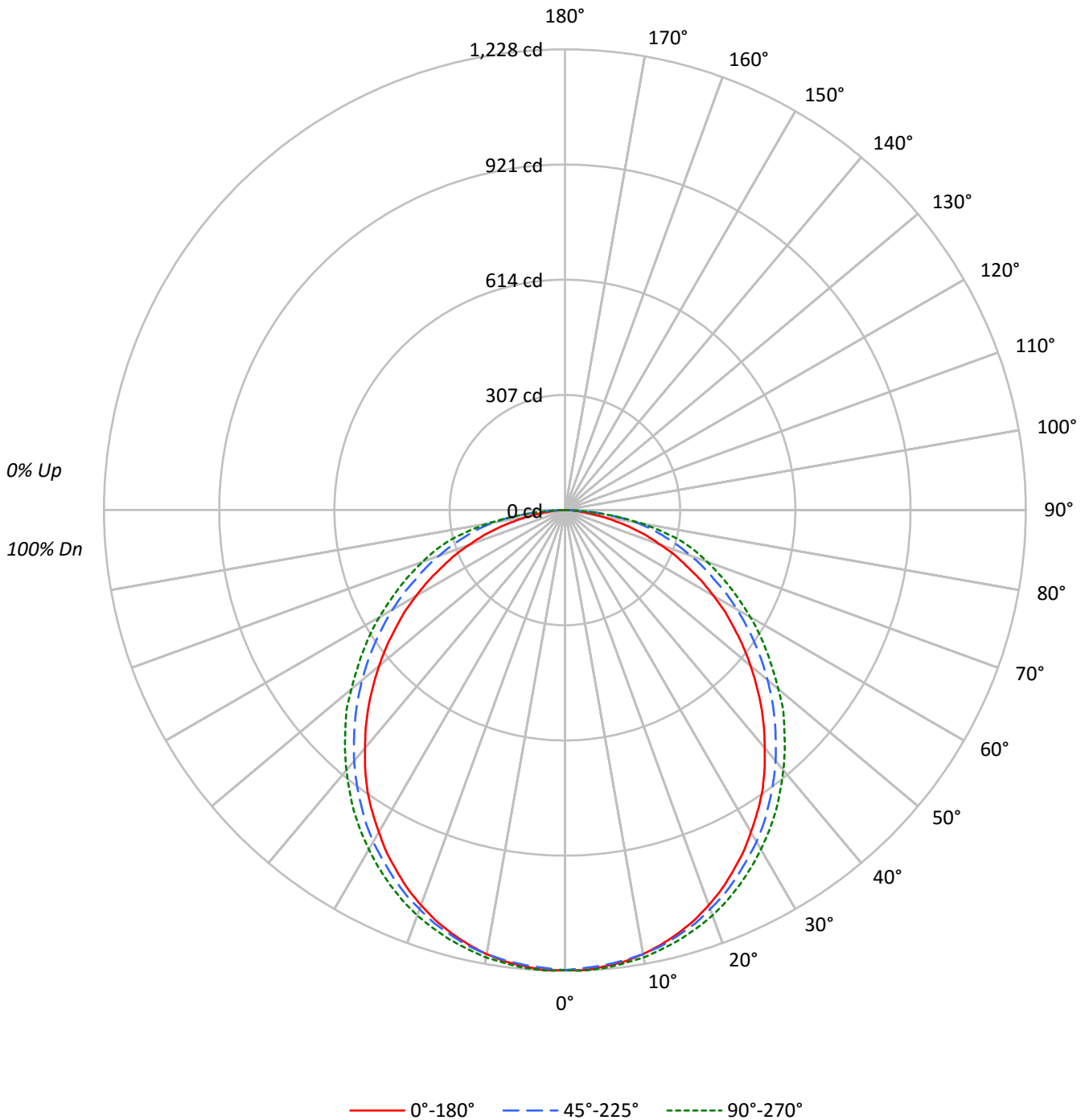
Input Watts (W): 29.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1650	1650	1650
5°	1648	1644	1655
10°	1642	1642	1654
15°	1626	1634	1651
20°	1605	1621	1646
25°	1575	1605	1636
30°	1540	1586	1622
35°	1506	1560	1610
40°	1454	1534	1591
45°	1407	1504	1574
50°	1353	1476	1555
55°	1293	1449	1540
60°	1232	1426	1536
65°	1154	1401	1546
70°	1068	1409	1587
75°	957	1435	1677
80°	773	1520	1640
85°	582	1335	1301



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.1	3.3
10°-20°	331.7	9.5
20°-30°	498.6	14.3
30°-40°	593.9	17.0
40°-50°	607.8	17.4
50°-60°	547.2	15.7
60°-70°	429.7	12.3
70°-80°	278.9	8.0
80°-90°	86.2	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°	946.3	27.1
0°-40°	1540.2	44.1
0°-60°	2695.1	77.2
0°-90°	3490.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3490.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1226	1226	1226	1226	1226	
5°	1220	1223	1217	1224	1225	116
15°	1167	1171	1173	1183	1185	329
25°	1061	1070	1081	1099	1102	489
35°	917	928	950	973	980	572
45°	739	757	790	820	827	570
55°	551	575	618	650	656	494
65°	362	390	440	477	486	361
75°	184	220	276	314	323	195
85°	38	70	86	84	84	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1226.1	1226.1	1226.1	1226.1	1226.1
2.5°	1227.2	1227.2	1221.6	1227.2	1228.3
5°	1220.5	1222.7	1217.2	1223.8	1225.0
7.5°	1213.9	1213.9	1210.5	1217.2	1218.3
10°	1201.7	1202.8	1201.7	1209.4	1210.5
12.5°	1186.2	1188.4	1189.5	1197.2	1198.3
15°	1167.3	1170.6	1172.8	1182.8	1185.0
17.5°	1146.2	1149.6	1155.1	1166.2	1168.4
20°	1120.7	1125.2	1131.8	1146.2	1149.6
22.5°	1093.0	1097.5	1108.6	1121.9	1127.4
25°	1060.9	1069.8	1080.8	1098.6	1101.9
27.5°	1028.7	1036.5	1050.9	1069.8	1074.2
30°	991.0	1003.2	1021.0	1039.8	1044.3
32.5°	954.5	966.7	987.7	1007.7	1013.2
35°	916.8	927.9	950.0	973.3	980.0
37.5°	873.5	888.0	912.3	935.6	942.3
40°	828.1	845.8	873.5	897.9	905.7
42.5°	784.9	803.7	831.4	858.0	866.9
45°	739.4	757.1	790.4	820.3	827.0
47.5°	692.8	712.8	748.3	778.2	789.3
50°	646.3	667.3	705.0	736.1	742.7
52.5°	599.7	621.9	661.8	695.1	698.4
55°	551.0	575.3	617.5	649.6	656.3
57.5°	506.6	527.7	573.1	606.4	614.1
60°	457.8	481.1	529.9	560.9	570.9
62.5°	411.3	435.7	486.7	517.7	526.6
65°	362.5	390.2	440.1	476.7	485.5
67.5°	320.4	347.0	400.2	435.7	444.5
70°	271.6	301.5	358.1	394.6	403.5
72.5°	229.5	260.5	317.0	352.5	365.8
75°	184.0	219.5	276.0	313.7	322.6
77.5°	139.7	180.7	238.3	267.2	267.2
80°	99.8	143.0	196.2	209.5	211.7
82.5°	65.4	107.5	145.2	144.1	144.1
85°	37.7	69.8	86.5	84.3	84.3
87.5°	14.4	28.8	31.0	31.0	29.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)