

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: P314222

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-S-CA125-W2A-U-4000K**

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: P314222
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: 24FCZ2-35HE-UNV-L83050-S-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 4000K 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: 3537.0 lumens
Efficiency: N/A
Efficacy: 133.0 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

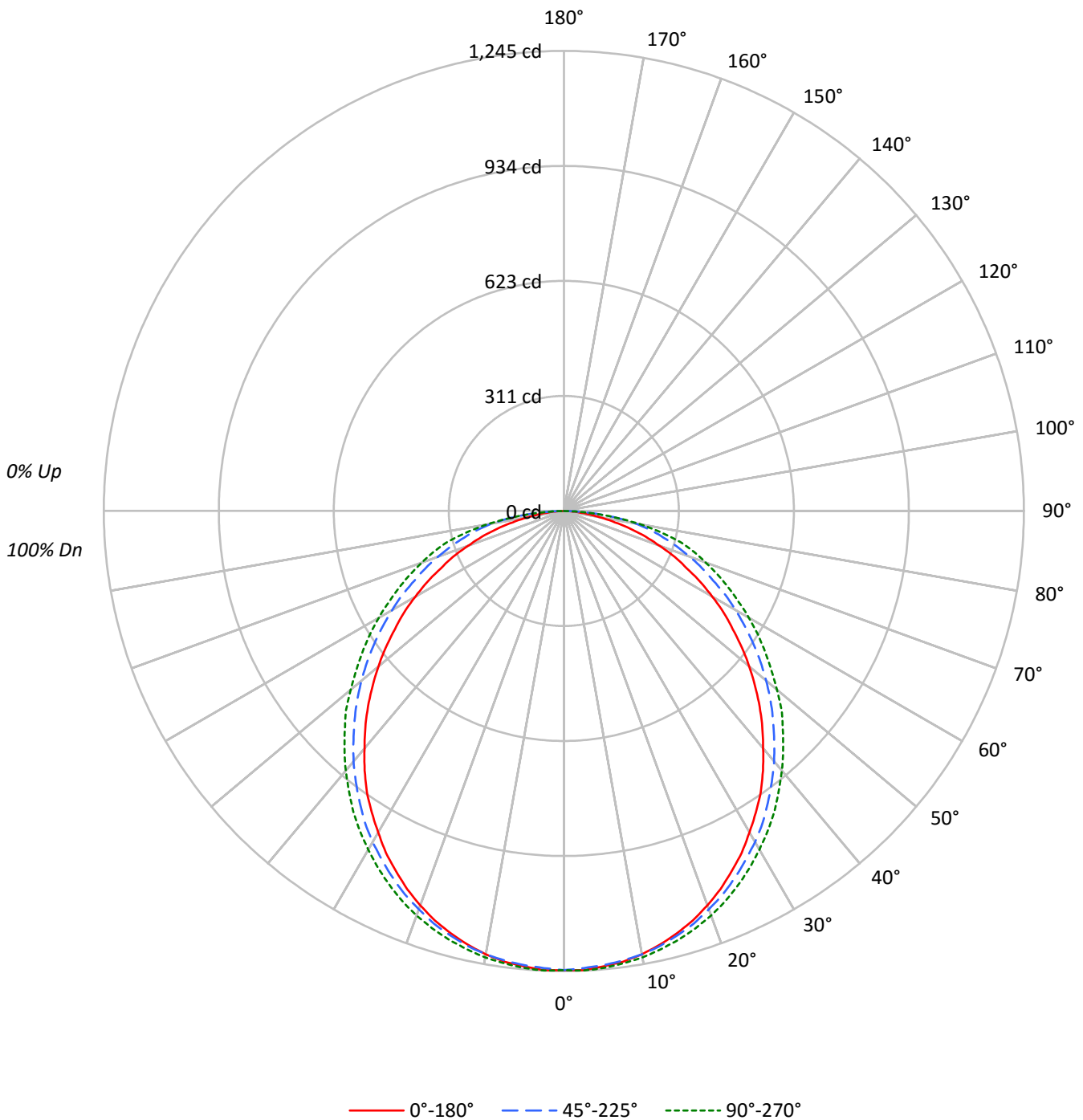
Input Watts (W): 26.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1672	1672	1672
5°	1671	1666	1677
10°	1664	1664	1676
15°	1648	1656	1673
20°	1626	1642	1668
25°	1596	1626	1658
30°	1560	1608	1644
35°	1526	1581	1631
40°	1474	1555	1612
45°	1426	1524	1595
50°	1371	1496	1576
55°	1310	1468	1560
60°	1249	1445	1557
65°	1170	1420	1567
70°	1083	1428	1609
75°	970	1454	1699
80°	783	1541	1663
85°	590	1352	1318



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.6	3.3
10°-20°	336.1	9.5
20°-30°	505.3	14.3
30°-40°	601.9	17.0
40°-50°	616.0	17.4
50°-60°	554.6	15.7
60°-70°	435.5	12.3
70°-80°	282.6	8.0
80°-90°	87.4	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°	959.0	27.1
0°-40°	1560.9	44.1
0°-60°	2731.4	77.2
0°-90°	3537.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3537.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1243	1243	1243	1243	1243	
5°	1237	1239	1234	1240	1241	118
15°	1183	1186	1189	1199	1201	334
25°	1075	1084	1095	1113	1117	495
35°	929	940	963	986	993	580
45°	749	767	801	831	838	578
55°	558	583	626	658	665	501
65°	367	396	446	483	492	366
75°	186	222	280	318	327	197
85°	38	71	88	85	85	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1242.6	1242.6	1242.6	1242.6	1242.6
2.5°	1243.7	1243.7	1238.1	1243.7	1244.8
5°	1237.0	1239.2	1233.6	1240.3	1241.4
7.5°	1230.2	1230.2	1226.8	1233.6	1234.7
10°	1217.9	1219.0	1217.9	1225.7	1226.8
12.5°	1202.1	1204.4	1205.5	1213.4	1214.5
15°	1183.0	1186.4	1188.6	1198.8	1201.0
17.5°	1161.7	1165.1	1170.7	1181.9	1184.2
20°	1135.8	1140.3	1147.1	1161.7	1165.1
22.5°	1107.8	1112.2	1123.5	1137.0	1142.6
25°	1075.2	1084.2	1095.4	1113.4	1116.7
27.5°	1042.6	1050.5	1065.1	1084.2	1088.7
30°	1004.4	1016.8	1034.7	1053.8	1058.3
32.5°	967.3	979.7	1001.0	1021.2	1026.9
35°	929.1	940.4	962.8	986.4	993.2
37.5°	885.3	899.9	924.6	948.2	955.0
40°	839.2	857.2	885.3	910.0	917.9
42.5°	795.4	814.5	842.6	869.6	878.6
45°	749.4	767.3	801.0	831.4	838.1
47.5°	702.2	722.4	758.4	788.7	799.9
50°	655.0	676.3	714.5	746.0	752.7
52.5°	607.8	630.3	670.7	704.4	707.8
55°	558.4	583.1	625.8	658.4	665.1
57.5°	513.4	534.8	580.8	614.5	622.4
60°	464.0	487.6	537.0	568.5	578.6
62.5°	416.8	441.5	493.2	524.7	533.7
65°	367.4	395.5	446.0	483.1	492.1
67.5°	324.7	351.6	405.6	441.5	450.5
70°	275.3	305.6	362.9	400.0	408.9
72.5°	232.6	264.0	321.3	357.3	370.7
75°	186.5	222.4	279.7	317.9	326.9
77.5°	141.6	183.1	241.5	270.8	270.8
80°	101.1	144.9	198.9	212.3	214.6
82.5°	66.3	109.0	147.2	146.1	146.1
85°	38.2	70.8	87.6	85.4	85.4
87.5°	14.6	29.2	31.5	31.5	30.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)