

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: P313738

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-RDP-CP250-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: P313738
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-CP250-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" 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: 3954.0 lumens
Efficiency: N/A
Efficacy: 71.6 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

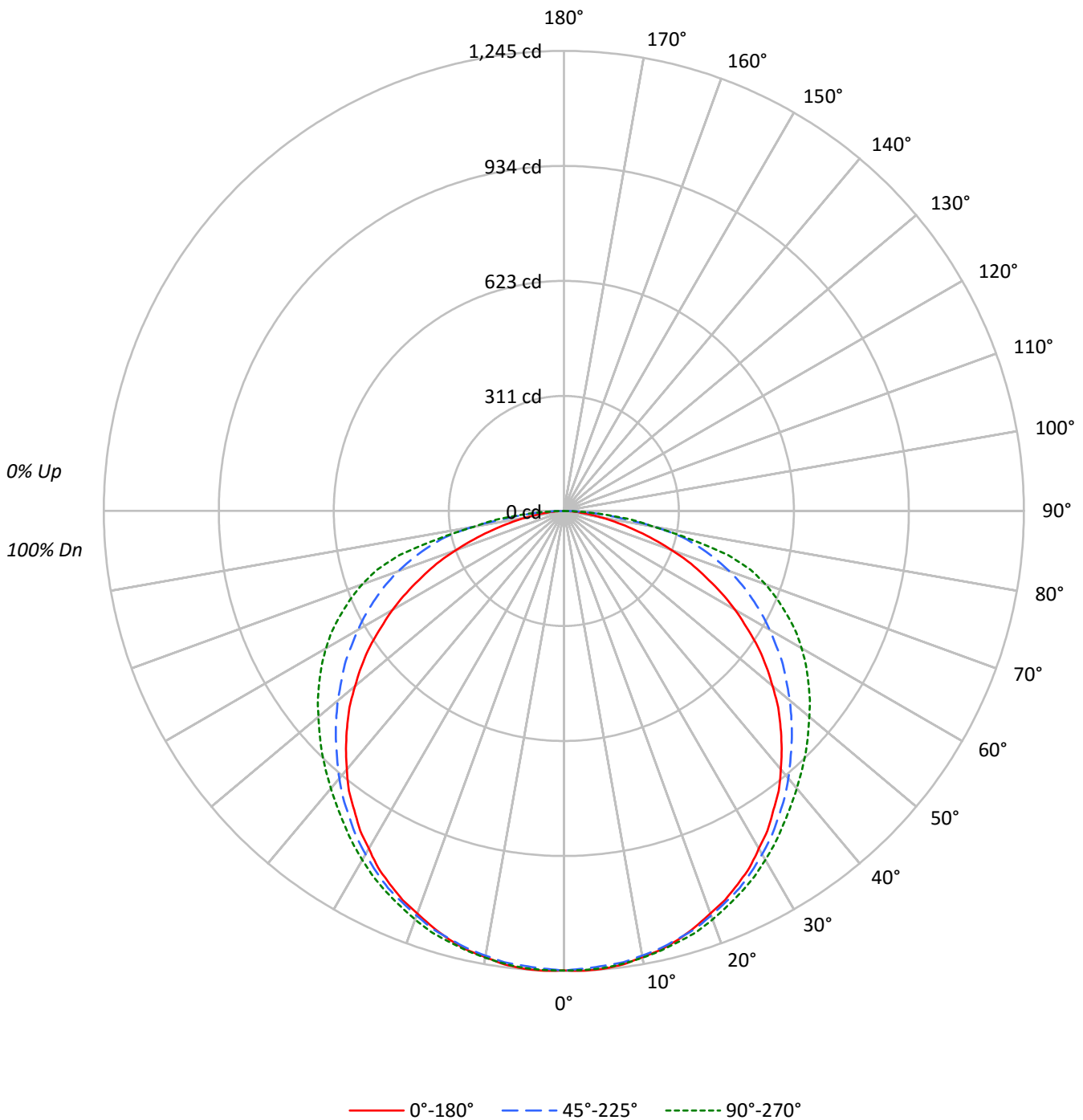
Input Watts (W): 55.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1673	1673	1673
5°	1679	1669	1677
10°	1675	1669	1677
15°	1672	1669	1680
20°	1660	1668	1685
25°	1654	1671	1689
30°	1639	1667	1694
35°	1624	1662	1701
40°	1605	1660	1722
45°	1579	1661	1761
50°	1544	1671	1815
55°	1504	1698	1895
60°	1441	1731	2000
65°	1349	1792	2123
70°	1227	1875	2284
75°	1040	1978	2386
80°	821	1991	1930
85°	605	1514	1695



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.0	3.0
10°-20°	339.5	8.6
20°-30°	519.1	13.1
30°-40°	634.6	16.0
40°-50°	676.3	17.1
50°-60°	646.7	16.4
60°-70°	547.8	13.9
70°-80°	368.2	9.3
80°-90°	103.9	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°	976.5	24.7
0°-40°	1611.1	40.7
0°-60°	2934.1	74.2
0°-90°	3954.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3954.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1243	1243	1243	1243	1243	
5°	1243	1242	1236	1242	1242	118
15°	1200	1200	1198	1208	1206	338
25°	1114	1118	1126	1136	1138	513
35°	988	996	1012	1032	1036	619
45°	830	843	873	910	926	640
55°	641	665	724	781	808	571
65°	424	467	563	637	667	421
75°	200	273	380	445	459	214
85°	39	80	98	106	110	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1243.4	1243.4	1243.4	1243.4	1243.4
2.5°	1245.4	1245.4	1239.5	1243.4	1243.4
5°	1243.4	1241.5	1235.6	1241.5	1241.5
7.5°	1237.5	1235.6	1231.7	1237.5	1235.6
10°	1225.8	1225.8	1221.8	1227.7	1227.7
12.5°	1216.0	1214.0	1212.0	1219.9	1217.9
15°	1200.3	1200.3	1198.3	1208.1	1206.2
17.5°	1180.7	1182.6	1184.6	1192.4	1194.4
20°	1159.1	1163.0	1165.0	1176.7	1176.7
22.5°	1139.5	1141.4	1145.4	1157.1	1157.1
25°	1114.0	1117.9	1125.7	1135.6	1137.5
27.5°	1088.5	1090.4	1100.3	1114.0	1115.9
30°	1055.1	1061.0	1072.8	1088.5	1090.4
32.5°	1025.7	1031.6	1045.3	1061.0	1064.9
35°	988.5	996.3	1012.0	1031.6	1035.5
37.5°	955.1	961.0	980.6	1002.2	1008.1
40°	913.9	925.7	945.3	970.8	980.6
42.5°	872.7	884.5	908.0	941.4	953.2
45°	829.6	843.3	872.7	910.0	925.7
47.5°	786.5	802.1	835.5	878.6	896.3
50°	737.4	757.0	798.2	847.3	866.9
52.5°	690.4	713.9	759.0	813.9	839.4
55°	641.3	664.9	723.7	780.6	808.0
57.5°	586.4	617.8	682.5	747.2	776.6
60°	535.4	564.8	643.3	713.9	743.3
62.5°	480.5	519.7	604.1	678.6	708.0
65°	423.6	466.8	562.9	637.4	666.8
67.5°	372.6	419.7	521.7	596.2	625.6
70°	311.8	370.7	476.6	551.1	580.5
72.5°	255.0	319.7	429.5	502.1	529.5
75°	200.0	272.6	380.5	445.2	458.9
77.5°	149.1	225.5	329.5	356.9	347.1
80°	105.9	180.4	256.9	243.2	249.1
82.5°	68.6	137.3	158.9	180.4	186.3
85°	39.2	80.4	98.1	105.9	109.8
87.5°	17.7	29.4	39.2	39.2	37.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)