

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: P310399

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-RDP-CP250-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: P310399
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-L82765-RDP-CP250-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 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: 3899.0 lumens
Efficiency: N/A
Efficacy: 71.0 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

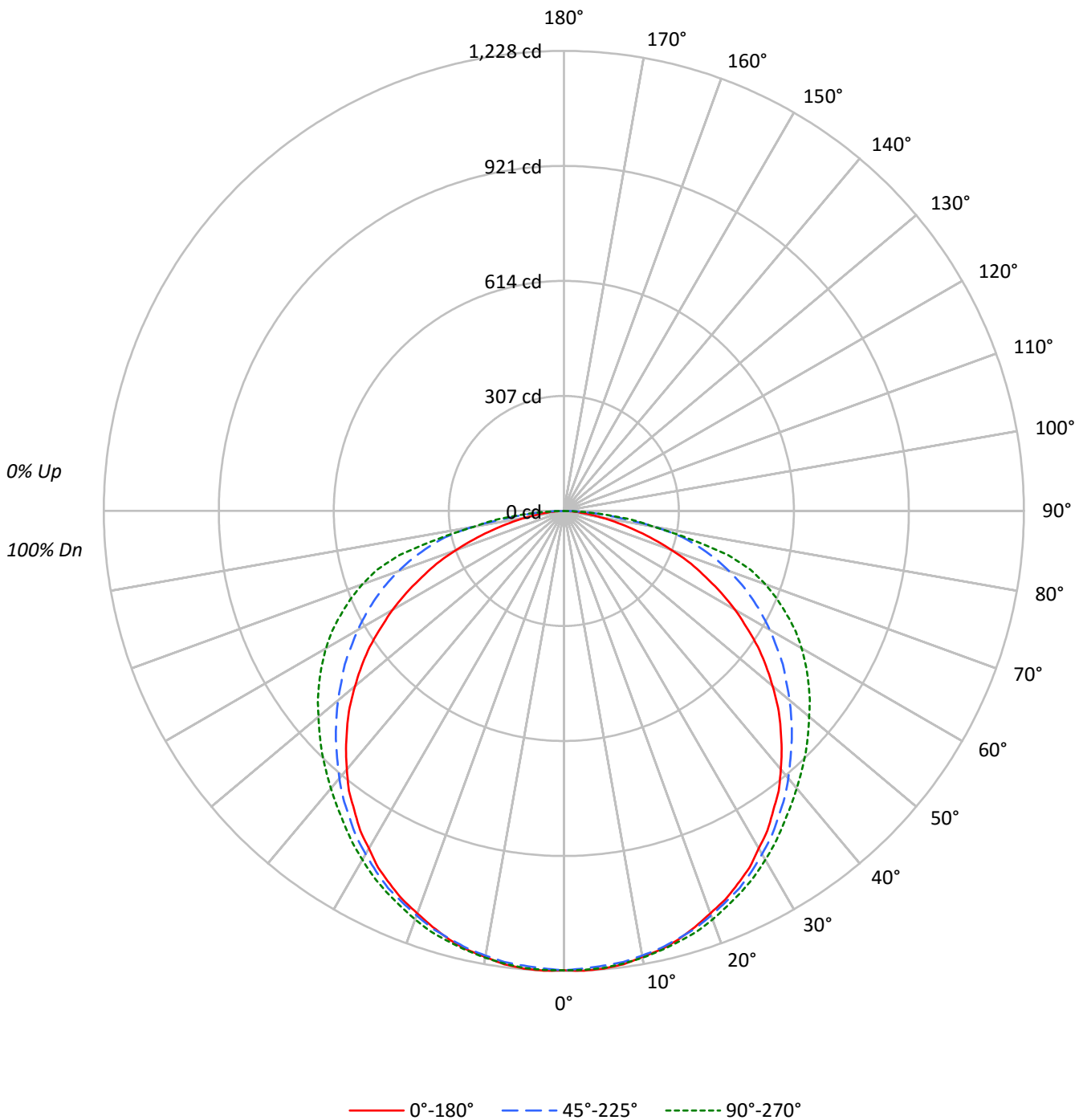
Input Watts (W): 54.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	68	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°	1650	1650	1650
5°	1656	1646	1653
10°	1651	1646	1654
15°	1649	1646	1657
20°	1637	1645	1662
25°	1631	1648	1665
30°	1617	1644	1671
35°	1601	1639	1677
40°	1583	1637	1698
45°	1557	1638	1737
50°	1522	1648	1789
55°	1483	1674	1869
60°	1421	1707	1972
65°	1330	1767	2093
70°	1210	1849	2252
75°	1026	1951	2352
80°	809	1963	1903
85°	597	1493	1672



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.3	3.0
10°-20°	334.7	8.6
20°-30°	511.9	13.1
30°-40°	625.8	16.0
40°-50°	666.9	17.1
50°-60°	637.7	16.4
60°-70°	540.2	13.9
70°-80°	363.0	9.3
80°-90°	102.4	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°	962.9	24.7
0°-40°	1588.7	40.7
0°-60°	2893.3	74.2
0°-90°	3899.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3899.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1226	1226	1226	1226	1226	
5°	1226	1224	1218	1224	1224	116
15°	1184	1184	1182	1191	1189	334
25°	1098	1102	1110	1120	1122	506
35°	975	982	998	1017	1021	611
45°	818	832	861	897	913	631
55°	632	656	714	770	797	563
65°	418	460	555	628	658	415
75°	197	269	375	439	452	211
85°	39	79	97	104	108	48
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°	1228.1	1228.1	1222.3	1226.1	1226.1
5°	1226.1	1224.2	1218.4	1224.2	1224.2
7.5°	1220.3	1218.4	1214.5	1220.3	1218.4
10°	1208.7	1208.7	1204.9	1210.7	1210.7
12.5°	1199.0	1197.1	1195.2	1202.9	1201.0
15°	1183.6	1183.6	1181.6	1191.3	1189.4
17.5°	1164.2	1166.2	1168.1	1175.8	1177.8
20°	1143.0	1146.8	1148.8	1160.4	1160.4
22.5°	1123.6	1125.6	1129.4	1141.0	1141.0
25°	1098.5	1102.4	1110.1	1119.8	1121.7
27.5°	1073.3	1075.3	1084.9	1098.5	1100.4
30°	1040.5	1046.3	1057.9	1073.3	1075.3
32.5°	1011.5	1017.3	1030.8	1046.3	1050.1
35°	974.7	982.4	997.9	1017.3	1021.1
37.5°	941.8	947.6	967.0	988.2	994.1
40°	901.2	912.8	932.2	957.3	967.0
42.5°	860.6	872.2	895.4	928.3	939.9
45°	818.1	831.6	860.6	897.4	912.8
47.5°	775.5	791.0	823.9	866.4	883.8
50°	727.2	746.5	787.1	835.5	854.8
52.5°	680.8	704.0	748.4	802.6	827.7
55°	632.4	655.6	713.6	769.7	796.8
57.5°	578.3	609.2	673.0	736.8	765.8
60°	528.0	557.0	634.3	704.0	733.0
62.5°	473.8	512.5	595.7	669.1	698.2
65°	417.7	460.3	555.0	628.5	657.5
67.5°	367.5	413.9	514.4	587.9	616.9
70°	307.5	365.5	469.9	543.4	572.4
72.5°	251.4	315.2	423.5	495.1	522.2
75°	197.3	268.8	375.2	439.0	452.5
77.5°	147.0	222.4	324.9	352.0	342.3
80°	104.4	177.9	253.3	239.8	245.6
82.5°	67.7	135.4	156.6	177.9	183.7
85°	38.7	79.3	96.7	104.4	108.3
87.5°	17.4	29.0	38.7	38.7	36.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)