

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: P309630

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-HRP-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: P309630
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
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-HRP-CP250-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 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: 3629.0 lumens
Efficiency: N/A
Efficacy: 82.7 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

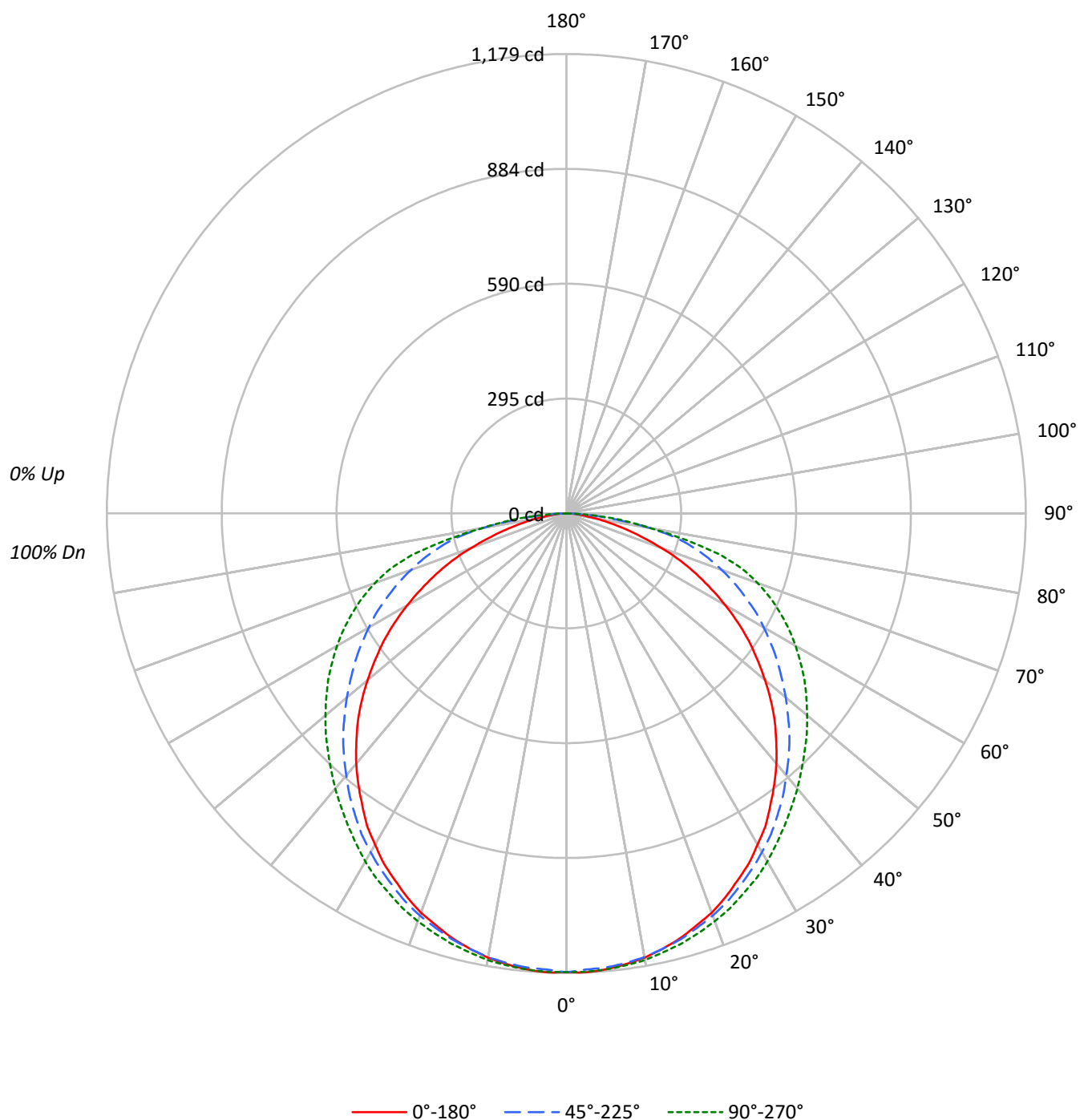
Input Watts (W): 43.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P309630

CATALOG NUMBER: 24FCZ2-55HE-UNV-L82765-HRP-CP250-W2A-U-4500K

Luminous Intensity Polar Plot





TEST NUMBER: P309630

CATALOG NUMBER: 24FCZ2-55HE-UNV-L82765-HRP-CP250-W2A-U-4500K

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1584	1584	1584
5°	1586	1580	1586
10°	1582	1580	1590
15°	1572	1577	1591
20°	1562	1573	1594
25°	1543	1565	1597
30°	1525	1560	1603
35°	1500	1552	1605
40°	1473	1542	1620
45°	1440	1541	1645
50°	1393	1539	1689
55°	1344	1550	1750
60°	1267	1574	1827
65°	1171	1611	1930
70°	1022	1668	2056
75°	829	1753	2125
80°	612	1719	1719
85°	469	1266	1431



TEST NUMBER: P309630

CATALOG NUMBER: 24FCZ2-55HE-UNV-L82765-HRP-CP250-W2A-U-4500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.5	3.1
10°-20°	320.3	8.8
20°-30°	487.6	13.4
30°-40°	592.1	16.3
40°-50°	625.5	17.2
50°-60°	590.3	16.3
60°-70°	490.8	13.5
70°-80°	322.9	8.9
80°-90°	88.0	2.4
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°	919.5	25.3
0°-40°	1511.5	41.7
0°-60°	2727.3	75.2
0°-90°	3629.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3629.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1177	1177	1177	1177	1177	
5°	1174	1174	1170	1174	1174	112
15°	1129	1130	1132	1142	1142	318
25°	1039	1045	1054	1073	1076	479
35°	913	924	945	969	977	572
45°	757	772	810	849	864	583
55°	573	597	661	723	746	510
65°	368	410	506	580	606	363
75°	160	232	337	400	409	172
85°	30	67	82	91	93	37
90°	0	0	0	0	0	



TEST NUMBER: P309630

CATALOG NUMBER: 24FCZ2-55HE-UNV-L82765-HRP-CP250-W2A-U-4500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1177.4	1177.4	1177.4	1177.4	1177.4
2.5°	1179.0	1177.4	1171.4	1177.4	1177.4
5°	1174.4	1174.4	1169.8	1174.4	1174.4
7.5°	1166.8	1166.8	1163.8	1169.8	1169.8
10°	1157.7	1157.7	1156.2	1163.8	1163.8
12.5°	1144.0	1145.5	1144.0	1153.1	1153.1
15°	1128.8	1130.3	1131.9	1142.5	1142.5
17.5°	1109.1	1112.1	1115.1	1127.3	1128.8
20°	1090.8	1092.4	1098.4	1112.1	1113.6
22.5°	1066.5	1071.1	1078.7	1092.4	1096.9
25°	1039.2	1045.3	1054.4	1072.6	1075.6
27.5°	1013.4	1017.9	1030.1	1049.8	1055.9
30°	981.4	989.0	1004.2	1024.0	1031.6
32.5°	951.1	958.7	976.9	998.2	1004.2
35°	913.1	923.7	945.0	969.3	976.9
37.5°	876.6	887.3	913.1	940.4	949.5
40°	838.6	850.8	878.1	910.0	922.2
42.5°	797.6	814.3	844.7	879.7	893.3
45°	756.6	771.8	809.8	849.3	864.5
47.5°	712.5	730.8	771.8	818.9	837.1
50°	665.4	688.2	735.3	787.0	806.7
52.5°	618.3	644.2	697.3	755.1	776.3
55°	572.8	597.1	660.9	723.2	746.0
57.5°	522.6	553.0	622.9	689.7	712.5
60°	471.0	504.4	584.9	654.8	679.1
62.5°	419.3	457.3	548.5	618.3	644.2
65°	367.7	410.2	505.9	580.4	606.2
67.5°	317.5	364.6	466.4	540.9	566.7
70°	259.8	319.0	423.9	496.8	522.6
72.5°	206.6	275.0	382.9	451.2	474.0
75°	159.5	232.4	337.3	399.6	408.7
77.5°	117.0	189.9	290.2	311.4	313.0
80°	79.0	151.9	221.8	218.8	221.8
82.5°	51.7	113.9	139.8	156.5	158.0
85°	30.4	66.8	82.0	91.2	92.7
87.5°	15.2	22.8	28.9	30.4	33.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)