

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: P309692

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-HRP-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: P309692
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: 24FCZ2-65HE-UNV-L82765-HRP-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 4509.0 lumens
Efficiency: N/A
Efficacy: 84.8 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

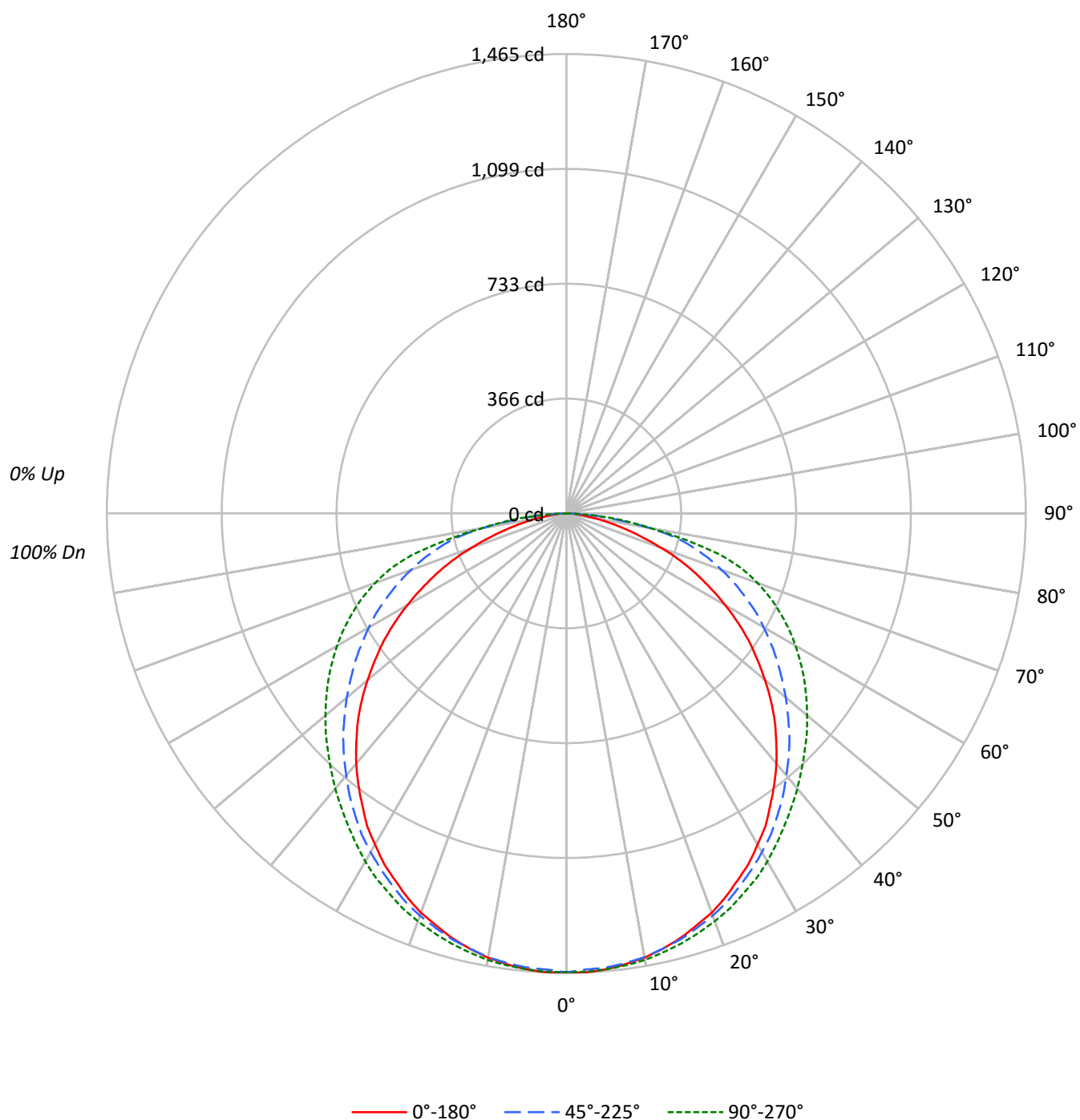
Input Watts (W): 53.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1968	1968	1968
5°	1971	1963	1971
10°	1965	1963	1976
15°	1954	1959	1977
20°	1941	1954	1981
25°	1917	1945	1984
30°	1895	1939	1991
35°	1863	1929	1994
40°	1830	1916	2012
45°	1789	1914	2044
50°	1731	1912	2098
55°	1669	1926	2174
60°	1575	1956	2271
65°	1454	2001	2398
70°	1270	2072	2555
75°	1030	2179	2640
80°	761	2135	2135
85°	584	1573	1777



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.6	3.1
10°-20°	398.0	8.8
20°-30°	605.9	13.4
30°-40°	735.7	16.3
40°-50°	777.2	17.2
50°-60°	733.4	16.3
60°-70°	609.8	13.5
70°-80°	401.2	8.9
80°-90°	109.4	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°	1142.4	25.3
0°-40°	1878.1	41.7
0°-60°	3388.7	75.2
0°-90°	4509.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4509.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1463	1463	1463	1463	1463	
5°	1459	1459	1454	1459	1459	139
15°	1402	1404	1406	1420	1420	396
25°	1291	1299	1310	1333	1336	596
35°	1134	1148	1174	1204	1214	710
45°	940	959	1006	1055	1074	724
55°	712	742	821	898	927	634
65°	457	510	629	721	753	452
75°	198	289	419	496	508	214
85°	38	83	102	113	115	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1462.9	1462.9	1462.9	1462.9	1462.9
2.5°	1464.8	1462.9	1455.4	1462.9	1462.9
5°	1459.2	1459.2	1453.5	1459.2	1459.2
7.5°	1449.7	1449.7	1446.0	1453.5	1453.5
10°	1438.4	1438.4	1436.5	1446.0	1446.0
12.5°	1421.4	1423.3	1421.4	1432.7	1432.7
15°	1402.5	1404.4	1406.3	1419.5	1419.5
17.5°	1378.0	1381.8	1385.6	1400.7	1402.5
20°	1355.4	1357.2	1364.8	1381.8	1383.7
22.5°	1325.1	1330.8	1340.2	1357.2	1362.9
25°	1291.2	1298.7	1310.0	1332.7	1336.5
27.5°	1259.1	1264.7	1279.8	1304.4	1311.9
30°	1219.4	1228.9	1247.8	1272.3	1281.7
32.5°	1181.7	1191.1	1213.8	1240.2	1247.8
35°	1134.5	1147.7	1174.1	1204.3	1213.8
37.5°	1089.2	1102.4	1134.5	1168.5	1179.8
40°	1042.0	1057.1	1091.1	1130.7	1145.8
42.5°	991.0	1011.8	1049.5	1093.0	1110.0
45°	940.1	958.9	1006.1	1055.2	1074.1
47.5°	885.3	908.0	958.9	1017.5	1040.1
50°	826.8	855.1	913.6	977.8	1002.4
52.5°	768.3	800.4	866.4	938.2	964.6
55°	711.7	741.9	821.1	898.5	926.8
57.5°	649.4	687.1	773.9	857.0	885.3
60°	585.2	626.7	726.8	813.6	843.8
62.5°	521.0	568.2	681.5	768.3	800.4
65°	456.8	509.7	628.6	721.1	753.2
67.5°	394.5	453.0	579.5	672.0	704.1
70°	322.8	396.4	526.7	617.3	649.4
72.5°	256.7	341.7	475.7	560.6	589.0
75°	198.2	288.8	419.1	496.5	507.8
77.5°	145.4	236.0	360.5	387.0	388.9
80°	98.2	188.8	275.6	271.8	275.6
82.5°	64.2	141.6	173.7	194.4	196.3
85°	37.8	83.1	101.9	113.3	115.1
87.5°	18.9	28.3	35.9	37.8	41.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)