

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: P309723

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-HRP-CP250-W2A-U-5700K**

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: P309723
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-CP250-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (336) 5700K 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: 4386.0 lumens
Efficiency: N/A
Efficacy: 81.1 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

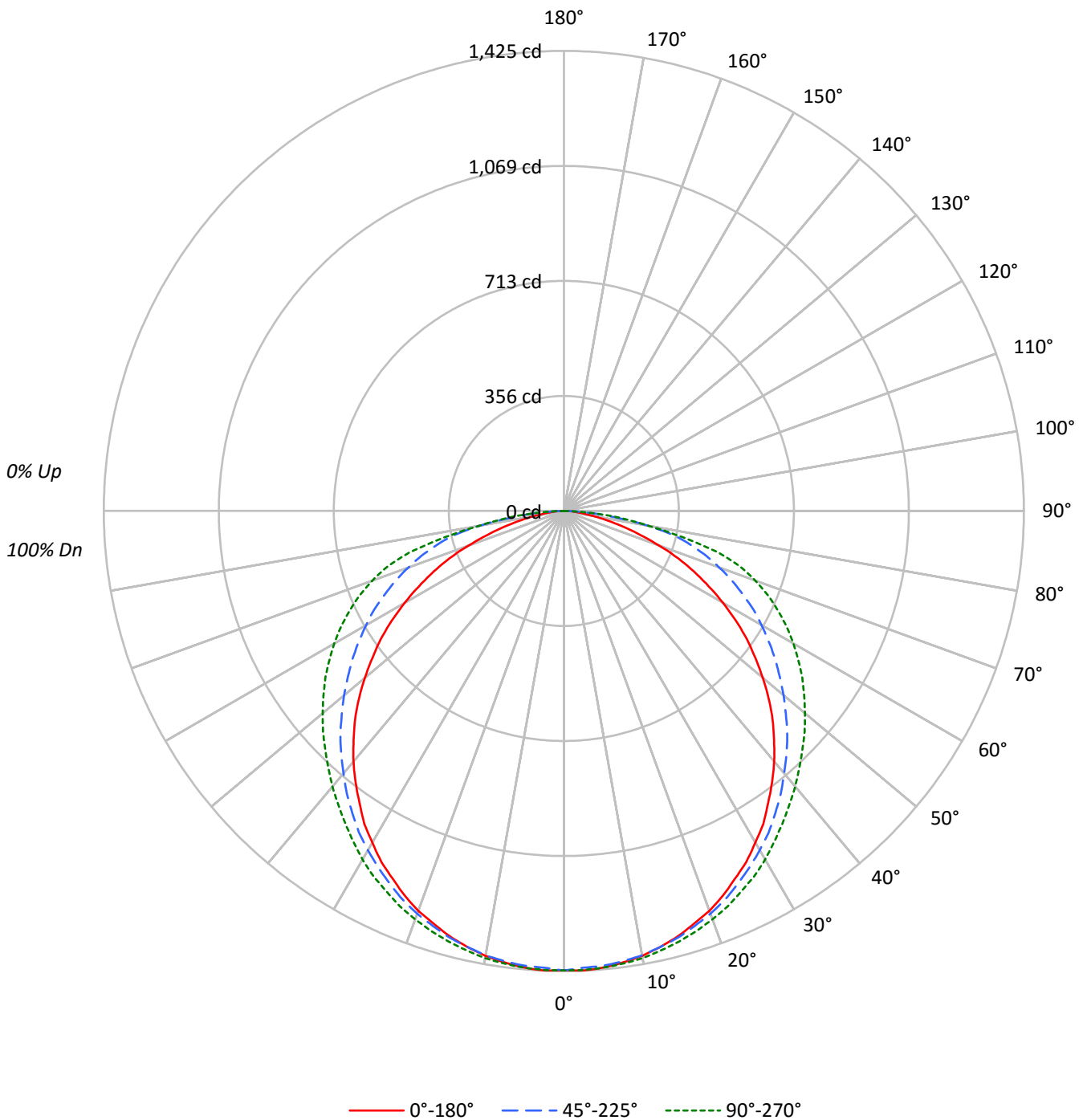
Input Watts (W): 54.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1915	1915	1915
5°	1917	1910	1917
10°	1912	1909	1922
15°	1900	1906	1923
20°	1888	1901	1927
25°	1864	1892	1930
30°	1843	1886	1937
35°	1813	1876	1939
40°	1780	1864	1958
45°	1740	1862	1988
50°	1683	1860	2041
55°	1624	1874	2115
60°	1532	1902	2209
65°	1415	1947	2332
70°	1235	2015	2485
75°	1002	2119	2568
80°	740	2077	2077
85°	567	1531	1729



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.8	3.1
10°-20°	387.1	8.8
20°-30°	589.3	13.4
30°-40°	715.6	16.3
40°-50°	756.0	17.2
50°-60°	713.4	16.3
60°-70°	593.2	13.5
70°-80°	390.2	8.9
80°-90°	106.4	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°	1111.3	25.3
0°-40°	1826.8	41.7
0°-60°	3296.2	75.2
0°-90°	4386.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4386.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1423	1423	1423	1423	1423	
5°	1419	1419	1414	1419	1419	135
15°	1364	1366	1368	1381	1381	385
25°	1256	1263	1274	1296	1300	579
35°	1104	1116	1142	1172	1181	691
45°	914	933	979	1026	1045	704
55°	692	722	799	874	902	617
65°	444	496	611	701	733	439
75°	193	281	408	483	494	208
85°	37	81	99	110	112	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1423.0	1423.0	1423.0	1423.0	1423.0
2.5°	1424.9	1423.0	1415.7	1423.0	1423.0
5°	1419.4	1419.4	1413.9	1419.4	1419.4
7.5°	1410.2	1410.2	1406.5	1413.9	1413.9
10°	1399.2	1399.2	1397.3	1406.5	1406.5
12.5°	1382.6	1384.5	1382.6	1393.7	1393.7
15°	1364.3	1366.1	1368.0	1380.8	1380.8
17.5°	1340.4	1344.1	1347.8	1362.4	1364.3
20°	1318.4	1320.2	1327.6	1344.1	1345.9
22.5°	1289.0	1294.5	1303.7	1320.2	1325.7
25°	1255.9	1263.3	1274.3	1296.3	1300.0
27.5°	1224.7	1230.2	1244.9	1268.8	1276.1
30°	1186.2	1195.4	1213.7	1237.6	1246.8
32.5°	1149.4	1158.6	1180.7	1206.4	1213.7
35°	1103.5	1116.4	1142.1	1171.5	1180.7
37.5°	1059.5	1072.3	1103.5	1136.6	1147.6
40°	1013.6	1028.3	1061.3	1099.9	1114.6
42.5°	964.0	984.2	1020.9	1063.1	1079.7
45°	914.4	932.8	978.7	1026.4	1044.8
47.5°	861.2	883.2	932.8	989.7	1011.7
50°	804.2	831.8	888.7	951.1	975.0
52.5°	747.3	778.5	842.8	912.6	938.3
55°	692.2	721.6	798.7	874.0	901.6
57.5°	631.6	668.4	752.8	833.6	861.2
60°	569.2	609.6	706.9	791.4	820.8
62.5°	506.8	552.7	662.9	747.3	778.5
65°	444.4	495.8	611.4	701.4	732.6
67.5°	383.8	440.7	563.7	653.7	684.9
70°	314.0	385.6	512.3	600.4	631.6
72.5°	249.7	332.3	462.7	545.3	572.9
75°	192.8	280.9	407.6	482.9	493.9
77.5°	141.4	229.5	350.7	376.4	378.3
80°	95.5	183.6	268.1	264.4	268.1
82.5°	62.4	137.7	168.9	189.1	191.0
85°	36.7	80.8	99.2	110.2	112.0
87.5°	18.4	27.5	34.9	36.7	40.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)