

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P931006

Luminaire Tested: DFN2DS-SQ3F0-090DS935-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931006
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-SQ3F0-090DS935-RLL
Description: 3 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

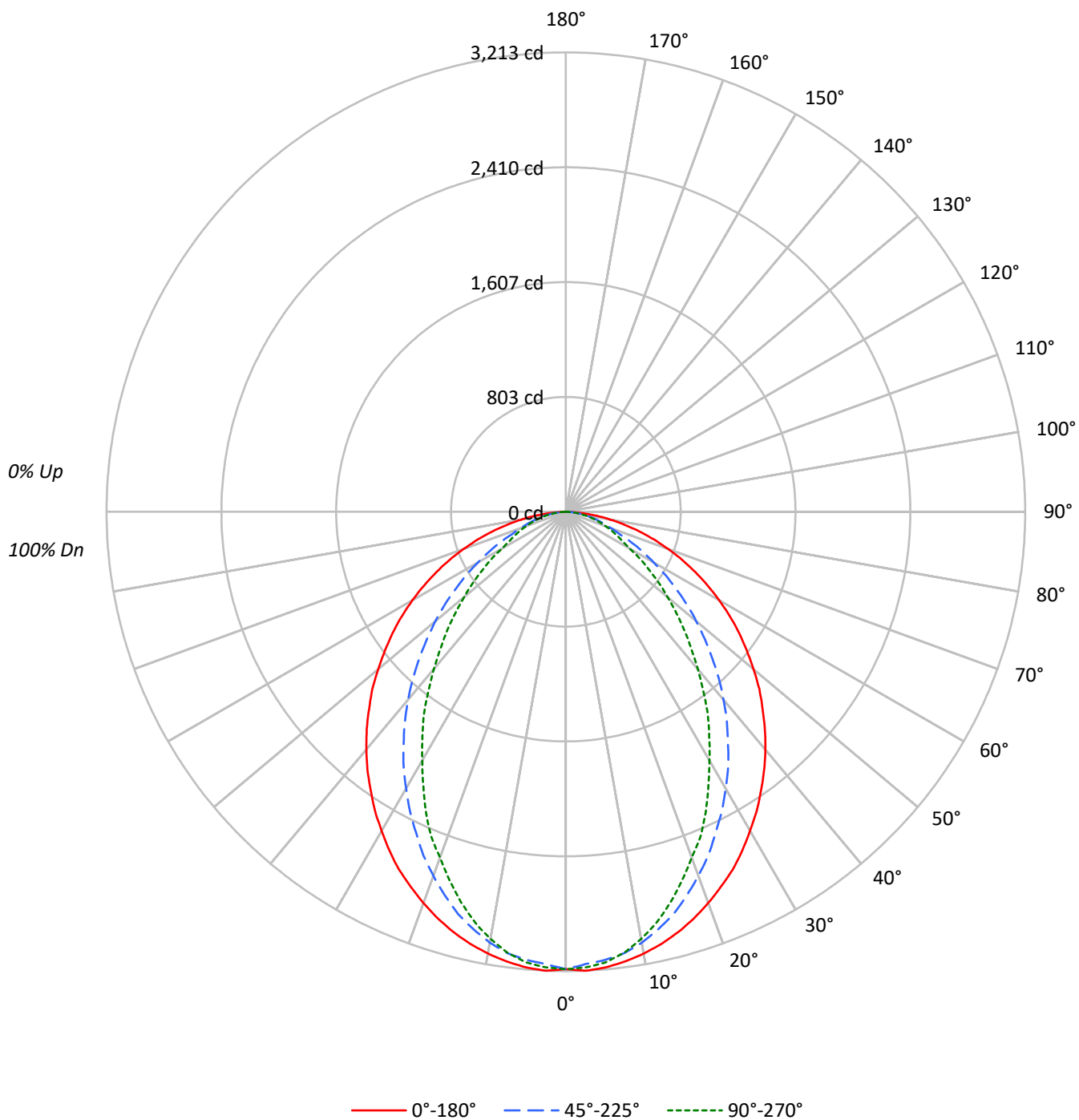
Lumens per Lamp: N/A
Luminaire Lumens: 6579.0 lumens
Efficiency: N/A
Efficacy: 70.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.996
Total Harmonic Distortion (THDi): 0.064
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P931006

CATALOG NUMBER: DFN2DS-SQ3F0-090DS935-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P931006

CATALOG NUMBER: DFN2DS-SQ3F0-090DS935-RLL

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3665	3665	3665
5°	3679	3619	3639
10°	3651	3560	3530
15°	3609	3455	3355
20°	3551	3304	3138
25°	3492	3133	2928
30°	3409	2957	2658
35°	3329	2766	2421
40°	3248	2568	2148
45°	3153	2346	1900
50°	3055	2121	1657
55°	2955	1879	1423
60°	2839	1625	1181
65°	2708	1366	1075
70°	2551	1125	989
75°	2358	1025	923
80°	2081	916	841
85°	1635	723	723

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3153 cd/sqm

TEST NUMBER: P931006

CATALOG NUMBER: DFN2DS-SQ3F0-090DS935-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	299.8	4.6
10°-20°	823.0	12.5
20°-30°	1155.5	17.6
30°-40°	1259.6	19.1
40°-50°	1157.7	17.6
50°-60°	909.2	13.8
60°-70°	591.8	9.0
70°-80°	304.6	4.6
80°-90°	77.8	1.2
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°	2278.3	34.6
0°-40°	3537.9	53.8
0°-60°	5604.8	85.2
0°-90°	6579.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6579.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3199	3199	3199	3199	3199	
5°	3199	3184	3147	3173	3164	303
15°	3043	3011	2912	2857	2828	857
25°	2762	2669	2478	2360	2316	1270
35°	2380	2232	1977	1795	1731	1489
45°	1946	1751	1448	1242	1172	1502
55°	1479	1253	941	767	712	1322
65°	999	764	504	405	396	990
75°	533	330	232	211	209	563
85°	124	64	55	55	55	149
90°	0	0	0	0	0	

TEST NUMBER: P931006

CATALOG NUMBER: DFN2DS-SQ3F0-090DS935-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3198.9	3198.9	3198.9	3198.9	3198.9
2.5°	3213.4	3198.9	3167.0	3196.2	3190.3
5°	3198.9	3184.5	3146.7	3172.8	3164.2
7.5°	3172.8	3155.6	3115.1	3126.4	3112.0
10°	3138.1	3117.8	3060.1	3051.2	3034.0
12.5°	3094.8	3068.7	2990.4	2973.2	2941.2
15°	3042.6	3010.7	2912.4	2857.4	2828.5
17.5°	2981.8	2935.4	2813.7	2750.2	2703.8
20°	2912.4	2854.3	2709.6	2637.4	2573.6
22.5°	2837.1	2770.5	2602.4	2504.1	2460.9
25°	2761.9	2669.1	2478.1	2359.5	2315.9
27.5°	2672.2	2573.6	2362.2	2226.2	2159.5
30°	2576.6	2466.4	2234.8	2087.4	2009.0
32.5°	2483.9	2350.6	2113.4	1939.6	1867.1
35°	2379.8	2232.0	1977.4	1795.0	1731.1
37.5°	2278.4	2119.0	1849.9	1650.0	1577.8
40°	2171.2	1997.7	1716.6	1511.2	1435.9
42.5°	2061.2	1876.1	1583.6	1369.3	1297.1
45°	1945.5	1751.4	1447.6	1241.8	1172.4
47.5°	1835.5	1630.0	1317.3	1111.6	1048.0
50°	1713.9	1508.4	1189.9	989.9	929.4
52.5°	1595.0	1377.9	1068.3	877.2	822.2
55°	1479.2	1253.4	940.8	767.3	712.3
57.5°	1360.7	1129.1	828.1	665.9	619.5
60°	1239.0	1007.4	709.2	561.8	515.4
62.5°	1120.5	888.9	607.8	469.0	446.0
65°	998.8	764.2	503.7	405.4	396.5
67.5°	883.0	648.4	405.4	356.0	347.4
70°	761.4	535.7	335.7	306.8	295.2
72.5°	645.6	431.2	280.7	257.7	251.9
75°	532.6	329.9	231.6	211.3	208.6
77.5°	419.9	234.4	182.4	170.8	164.9
80°	315.4	168.0	138.8	127.5	127.5
82.5°	219.9	113.0	95.5	89.7	89.7
85°	124.4	63.6	55.0	55.0	55.0
87.5°	46.4	23.0	23.0	20.3	20.3
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P931006

CATALOG NUMBER: DFN2DS-SQ3F0-090DS935-RLL

CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	15.75	17.27	16.11	17.58	17.90	11.71	13.23	12.07	13.54	13.86
	3H	17.51	18.88	17.89	19.21	19.57	12.97	14.34	13.35	14.67	15.03
	4H	18.18	19.46	18.58	19.81	20.19	13.48	14.76	13.87	15.10	15.48
	6H	18.67	19.85	19.08	20.22	20.61	13.86	15.04	14.27	15.41	15.80
	8H	18.83	19.96	19.26	20.35	20.75	13.98	15.11	14.41	15.50	15.90
	12H	18.94	20.01	19.37	20.40	20.83	14.06	15.14	14.49	15.52	15.95
4H	2H	15.85	17.13	16.25	17.48	17.86	12.40	13.68	12.80	14.03	14.41
	3H	17.78	18.85	18.20	19.25	19.65	13.85	14.91	14.26	15.31	15.71
	4H	18.53	19.49	18.97	19.91	20.35	14.45	15.40	14.88	15.82	16.26
	6H	19.13	19.96	19.58	20.40	20.86	14.93	15.77	15.39	16.21	16.67
	8H	19.34	20.12	19.80	20.56	21.03	15.10	15.87	15.56	16.32	16.79
	12H	19.49	20.19	19.98	20.67	21.14	15.21	15.91	15.70	16.39	16.86
8H	4H	18.56	19.34	19.02	19.78	20.25	14.80	15.58	15.26	16.02	16.49
	6H	19.20	19.84	19.69	20.33	20.81	15.39	16.03	15.88	16.52	17.00
	8H	19.45	20.02	19.96	20.53	21.02	15.61	16.18	16.12	16.69	17.18
	12H	19.65	20.16	20.16	20.65	21.22	15.79	16.30	16.30	16.79	17.35
12H	4H	18.54	19.24	19.03	19.72	20.19	14.84	15.54	15.33	16.02	16.49
	6H	19.18	19.75	19.69	20.26	20.75	15.45	16.03	15.96	16.54	17.03
	8H	19.46	19.97	19.97	20.46	21.03	15.72	16.23	16.23	16.73	17.29