

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: P931041

Luminaire Tested: DFN2DS-SQ3F0-110DS935-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931041
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-SQ3F0-110DS935-FLL
Description: 3 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

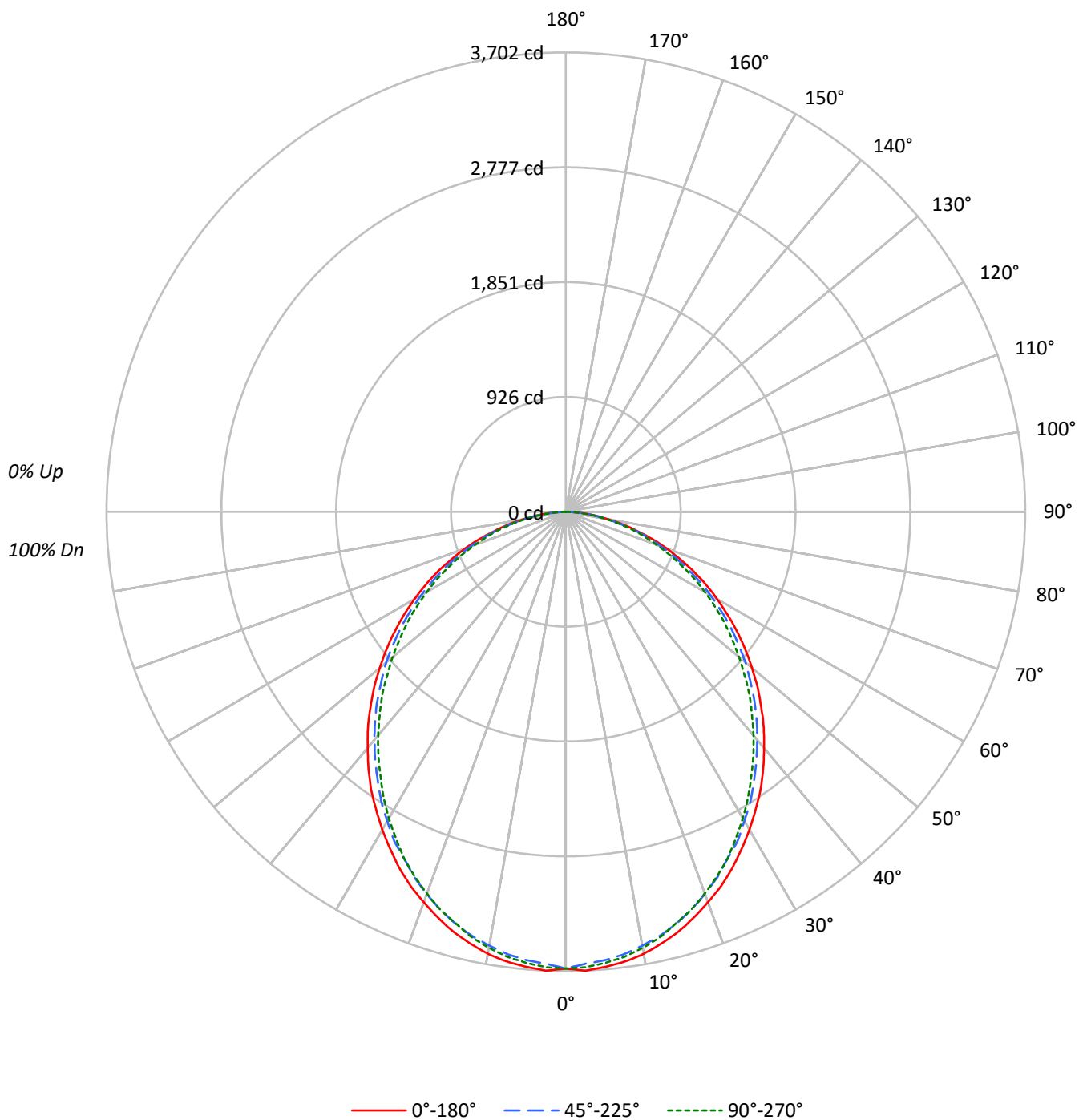
Lumens per Lamp: N/A
Luminaire Lumens: 9365.4 lumens
Efficiency: N/A
Efficacy: 79.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 117.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9977
Total Harmonic Distortion (THDi): 0.049
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P931041

CATALOG NUMBER: DFN2DS-SQ3F0-110DS935-FLL

Luminous Intensity Polar Plot



TEST NUMBER: P931041

CATALOG NUMBER: DFN2DS-SQ3F0-110DS935-FLL

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	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4218	4218	4218
5°	4234	4173	4197
10°	4209	4131	4151
15°	4157	4077	4073
20°	4083	3996	3992
25°	4009	3898	3898
30°	3915	3807	3775
35°	3827	3698	3644
40°	3717	3589	3521
45°	3608	3481	3396
50°	3489	3369	3249
55°	3366	3239	3119
60°	3228	3082	2969
65°	3081	2927	2793
70°	2893	2739	2609
75°	2631	2522	2461
80°	2336	2265	2148
85°	1906	1817	1629

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3608 cd/sqm

TEST NUMBER: P931041

CATALOG NUMBER: DFN2DS-SQ3F0-110DS935-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	346.4	3.7
10°-20°	974.8	10.4
20°-30°	1432.5	15.3
30°-40°	1663.8	17.8
40°-50°	1661.8	17.7
50°-60°	1449.0	15.5
60°-70°	1071.1	11.4
70°-80°	606.0	6.5
80°-90°	160.0	1.7
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°	2753.8	29.4
0°-40°	4417.6	47.2
0°-60°	7528.3	80.4
0°-90°	9365.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9365.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3681	3681	3681	3681	3681	
5°	3681	3667	3628	3656	3649	349
15°	3504	3483	3437	3451	3434	987
25°	3171	3143	3083	3090	3083	1459
35°	2736	2701	2644	2623	2605	1709
45°	2226	2202	2148	2110	2096	1718
55°	1685	1664	1621	1579	1561	1506
65°	1136	1115	1080	1048	1030	1124
75°	594	588	570	549	556	635
85°	145	142	138	127	124	170
90°	0	0	0	0	0	

TEST NUMBER: P931041

CATALOG NUMBER: DFN2DS-SQ3F0-110DS935-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3681.0	3681.0	3681.0	3681.0	3681.0
2.5°	3702.3	3684.7	3645.6	3681.0	3674.2
5°	3681.0	3667.0	3628.0	3656.1	3649.4
7.5°	3656.1	3635.1	3596.1	3624.6	3617.5
10°	3617.5	3592.6	3550.3	3578.4	3567.9
12.5°	3564.2	3543.1	3500.7	3518.3	3511.2
15°	3504.1	3483.0	3436.8	3451.1	3433.5
17.5°	3429.7	3408.7	3362.5	3380.1	3362.5
20°	3348.2	3327.2	3277.6	3288.1	3274.3
22.5°	3267.1	3235.1	3189.0	3189.0	3181.8
25°	3171.3	3143.2	3083.1	3089.9	3083.1
27.5°	3065.0	3040.3	2994.4	2983.9	2966.3
30°	2959.2	2930.6	2877.6	2867.2	2852.9
32.5°	2845.7	2824.8	2768.0	2746.6	2732.3
35°	2736.1	2700.8	2644.1	2622.7	2605.0
37.5°	2612.2	2580.3	2523.6	2498.7	2481.1
40°	2484.9	2456.3	2399.7	2368.1	2353.8
42.5°	2361.0	2332.4	2276.1	2240.4	2219.4
45°	2226.5	2201.7	2148.4	2109.8	2095.5
47.5°	2095.5	2070.7	2013.9	1974.9	1953.8
50°	1957.3	1939.6	1890.0	1840.5	1822.9
52.5°	1822.9	1798.0	1752.2	1713.1	1688.4
55°	1685.0	1663.6	1621.2	1578.7	1561.1
57.5°	1546.8	1529.2	1483.0	1440.5	1426.2
60°	1408.6	1394.7	1345.1	1306.1	1295.6
62.5°	1274.2	1249.4	1214.1	1178.8	1164.5
65°	1136.3	1114.9	1079.6	1047.7	1030.1
67.5°	994.8	976.8	945.2	920.5	906.2
70°	863.7	849.4	817.5	792.7	778.8
72.5°	729.3	715.0	697.4	672.6	662.0
75°	594.4	587.7	569.7	548.7	555.8
77.5°	474.3	460.0	452.9	442.4	431.9
80°	354.1	350.4	343.2	332.7	325.6
82.5°	240.7	240.7	237.4	223.1	223.1
85°	145.0	141.6	138.2	127.3	123.9
87.5°	63.8	56.7	49.5	39.0	35.3
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P931041

CATALOG NUMBER: DFN2DS-SQ3F0-110DS935-FLL

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	16.28	17.89	16.65	18.21	18.52	15.84	17.45	16.20	17.76	18.08
	3H	18.03	19.49	18.41	19.81	20.17	17.54	19.00	17.92	19.32	19.68
	4H	18.68	20.05	19.08	20.40	20.77	18.18	19.55	18.58	19.90	20.28
	6H	19.15	20.42	19.56	20.78	21.17	18.65	19.92	19.06	20.28	20.67
	8H	19.29	20.50	19.72	20.89	21.29	18.79	20.00	19.21	20.39	20.79
	12H	19.38	20.54	19.81	20.92	21.35	18.87	20.03	19.30	20.41	20.84
4H	2H	16.84	18.21	17.24	18.56	18.94	16.49	17.86	16.89	18.21	18.58
	3H	18.82	19.96	19.23	20.36	20.76	18.41	19.56	18.82	19.96	20.36
	4H	19.60	20.63	20.03	21.04	21.48	19.17	20.21	19.60	20.62	21.06
	6H	20.19	21.10	20.65	21.54	21.99	19.76	20.66	20.21	21.10	21.56
	8H	20.38	21.23	20.84	21.67	22.14	19.94	20.79	20.40	21.23	21.70
	12H	20.51	21.27	20.99	21.75	22.22	20.06	20.82	20.54	21.30	21.77
8H	4H	19.87	20.72	20.33	21.16	21.62	19.49	20.34	19.95	20.78	21.25
	6H	20.58	21.29	21.08	21.77	22.25	20.20	20.90	20.70	21.39	21.87
	8H	20.84	21.47	21.35	21.98	22.47	20.45	21.08	20.96	21.59	22.07
	12H	21.04	21.60	21.55	22.09	22.65	20.63	21.19	21.14	21.68	22.24
12H	4H	19.89	20.65	20.37	21.13	21.60	19.53	20.29	20.01	20.77	21.24
	6H	20.63	21.26	21.14	21.77	22.25	20.26	20.89	20.77	21.40	21.88
	8H	20.94	21.50	21.45	21.99	22.55	20.56	21.12	21.07	21.61	22.17