

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: P931059

Luminaire Tested: DFN2DS-SQ3F0-120DS935-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931059
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-SQ3F0-120DS935-FLL
Description: 3 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

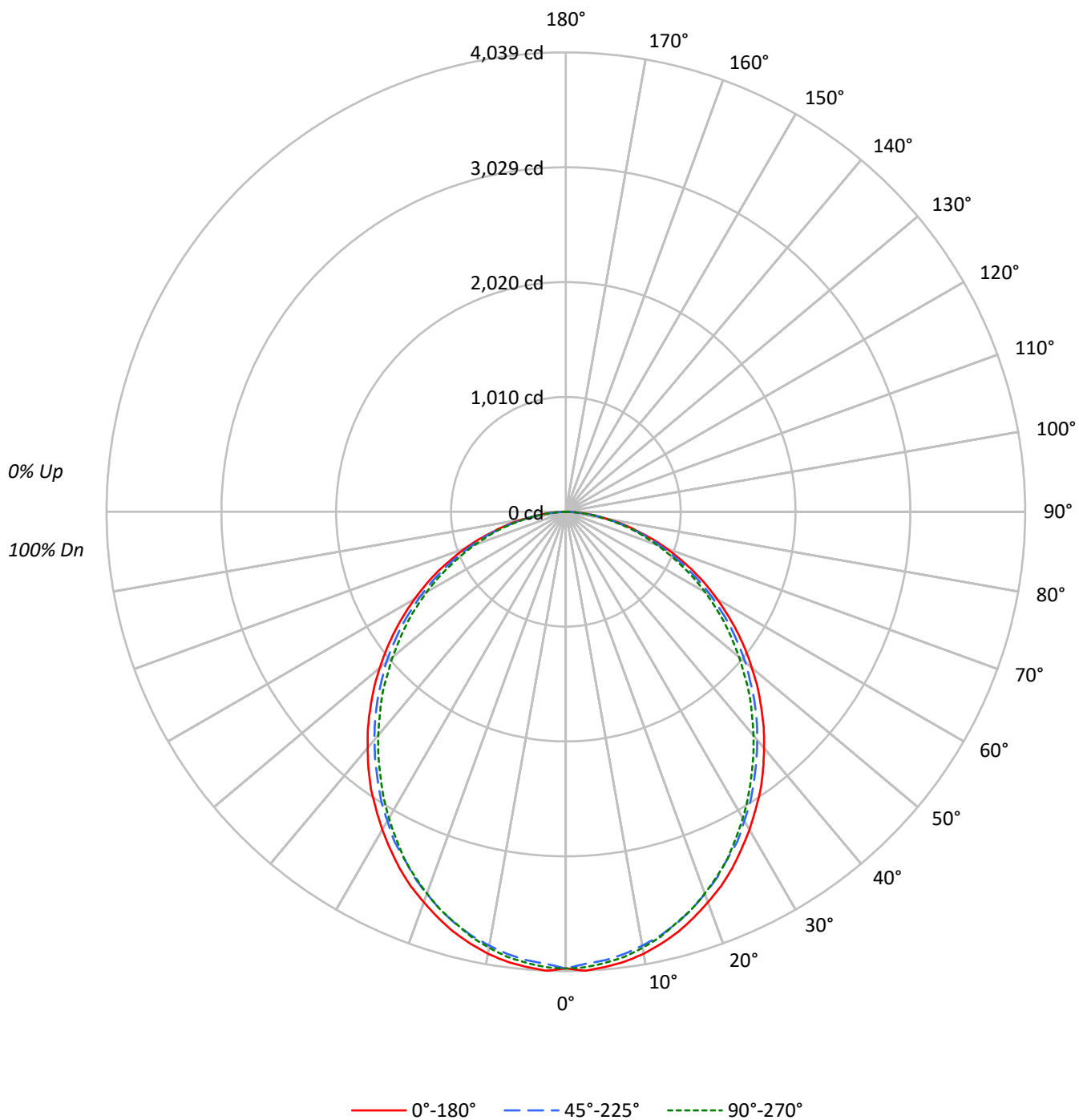
Lumens per Lamp: N/A
Luminaire Lumens: 10216.8 lumens
Efficiency: N/A
Efficacy: 77.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 131.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9957
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: P931059

CATALOG NUMBER: DFN2DS-SQ3F0-120DS935-FLL

Luminous Intensity Polar Plot



TEST NUMBER: P931059

CATALOG NUMBER: DFN2DS-SQ3F0-120DS935-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°	4601	4601	4601
5°	4619	4552	4579
10°	4592	4506	4529
15°	4534	4447	4443
20°	4454	4360	4355
25°	4374	4252	4252
30°	4271	4153	4118
35°	4175	4035	3975
40°	4055	3916	3841
45°	3936	3798	3704
50°	3806	3675	3545
55°	3672	3533	3402
60°	3521	3363	3239
65°	3361	3193	3047
70°	3156	2988	2847
75°	2871	2751	2684
80°	2549	2470	2344
85°	2080	1983	1777

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3936 cd/sqm

TEST NUMBER: P931059

CATALOG NUMBER: DFN2DS-SQ3F0-120DS935-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	377.9	3.7
10°-20°	1063.4	10.4
20°-30°	1562.8	15.3
30°-40°	1815.1	17.8
40°-50°	1812.8	17.7
50°-60°	1580.7	15.5
60°-70°	1168.5	11.4
70°-80°	661.1	6.5
80°-90°	174.5	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°	3004.1	29.4
0°-40°	4819.2	47.2
0°-60°	8212.7	80.4
0°-90°	10216.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10216.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4016	4016	4016	4016	4016	
5°	4016	4000	3958	3988	3981	381
15°	3823	3800	3749	3765	3746	1077
25°	3460	3429	3363	3371	3363	1592
35°	2985	2946	2884	2861	2842	1864
45°	2429	2402	2344	2302	2286	1875
55°	1838	1815	1768	1722	1703	1643
65°	1240	1216	1178	1143	1124	1226
75°	648	641	621	599	606	692
85°	158	154	151	139	135	186
90°	0	0	0	0	0	

TEST NUMBER: P931059

CATALOG NUMBER: DFN2DS-SQ3F0-120DS935-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4015.6	4015.6	4015.6	4015.6	4015.6
2.5°	4038.9	4019.6	3977.1	4015.6	4008.2
5°	4015.6	4000.4	3957.8	3988.5	3981.1
7.5°	3988.5	3965.5	3923.0	3954.1	3946.4
10°	3946.4	3919.3	3873.0	3903.7	3892.3
12.5°	3888.1	3865.2	3818.9	3838.2	3830.4
15°	3822.6	3799.7	3749.3	3764.8	3745.6
17.5°	3741.5	3718.6	3668.2	3687.4	3668.2
20°	3652.6	3629.6	3575.6	3587.1	3571.9
22.5°	3564.1	3529.3	3478.9	3478.9	3471.1
25°	3459.6	3428.9	3363.4	3370.8	3363.4
27.5°	3343.7	3316.7	3266.7	3255.2	3236.0
30°	3228.2	3197.0	3139.3	3127.8	3112.3
32.5°	3104.4	3081.6	3019.6	2996.3	2980.8
35°	2984.8	2946.4	2884.4	2861.1	2841.9
37.5°	2849.6	2814.9	2752.9	2725.9	2706.7
40°	2710.8	2679.7	2617.8	2583.4	2567.8
42.5°	2575.6	2544.5	2483.0	2444.1	2421.2
45°	2428.9	2401.9	2343.7	2301.5	2286.0
47.5°	2286.0	2258.9	2197.0	2154.5	2131.5
50°	2135.2	2115.9	2061.8	2007.8	1988.5
52.5°	1988.5	1961.5	1911.5	1868.9	1841.9
55°	1838.2	1814.9	1768.5	1722.2	1703.0
57.5°	1687.4	1668.1	1617.7	1571.5	1555.9
60°	1536.6	1521.5	1467.4	1424.8	1413.3
62.5°	1390.0	1362.9	1324.5	1286.0	1270.4
65°	1239.7	1216.3	1177.8	1142.9	1123.8
67.5°	1085.2	1065.5	1031.1	1004.1	988.6
70°	942.2	926.6	891.8	864.8	849.7
72.5°	795.6	780.0	760.8	733.8	722.2
75°	648.5	641.1	621.4	598.6	606.3
77.5°	517.4	501.8	494.1	482.5	471.1
80°	386.3	382.2	374.4	363.0	355.2
82.5°	262.6	262.6	258.9	243.4	243.4
85°	158.2	154.5	150.8	138.9	135.2
87.5°	69.7	61.8	54.1	42.6	38.5
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P931059

CATALOG NUMBER: DFN2DS-SQ3F0-120DS935-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	16.59	18.20	16.95	18.51	18.82	16.14	17.75	16.51	18.07	18.38
	3H	18.34	19.79	18.71	20.12	20.48	17.84	19.30	18.22	19.63	19.99
	4H	18.98	20.35	19.38	20.70	21.07	18.49	19.86	18.89	20.20	20.58
	6H	19.45	20.72	19.86	21.08	21.47	18.95	20.22	19.36	20.58	20.97
	8H	19.59	20.80	20.02	21.19	21.59	19.09	20.30	19.52	20.69	21.09
	12H	19.68	20.84	20.11	21.23	21.65	19.17	20.33	19.60	20.71	21.14
4H	2H	17.15	18.51	17.54	18.86	19.24	16.79	18.16	17.19	18.51	18.89
	3H	19.12	20.27	19.53	20.66	21.06	18.71	19.86	19.12	20.26	20.66
	4H	19.90	20.93	20.33	21.35	21.78	19.47	20.51	19.91	20.92	21.36
	6H	20.49	21.40	20.95	21.84	22.30	20.06	20.97	20.52	21.41	21.86
	8H	20.68	21.53	21.14	21.97	22.44	20.25	21.09	20.71	21.53	22.00
	12H	20.82	21.58	21.30	22.05	22.52	20.36	21.12	20.84	21.60	22.07
8H	4H	20.17	21.02	20.63	21.46	21.93	19.80	20.64	20.26	21.09	21.55
	6H	20.88	21.59	21.38	22.08	22.55	20.50	21.21	21.00	21.69	22.17
	8H	21.14	21.77	21.65	22.28	22.77	20.75	21.38	21.26	21.89	22.38
	12H	21.34	21.90	21.85	22.39	22.95	20.93	21.49	21.44	21.98	22.54
12H	4H	20.20	20.96	20.68	21.43	21.90	19.83	20.59	20.31	21.07	21.54
	6H	20.93	21.56	21.44	22.07	22.55	20.56	21.19	21.07	21.70	22.19
	8H	21.24	21.80	21.75	22.29	22.85	20.87	21.42	21.37	21.91	22.48