

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: P931025

Luminaire Tested: DFN2DS-SQ3F0-100DS940-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931025
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-SQ3F0-100DS940-FLL
Description: 3 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

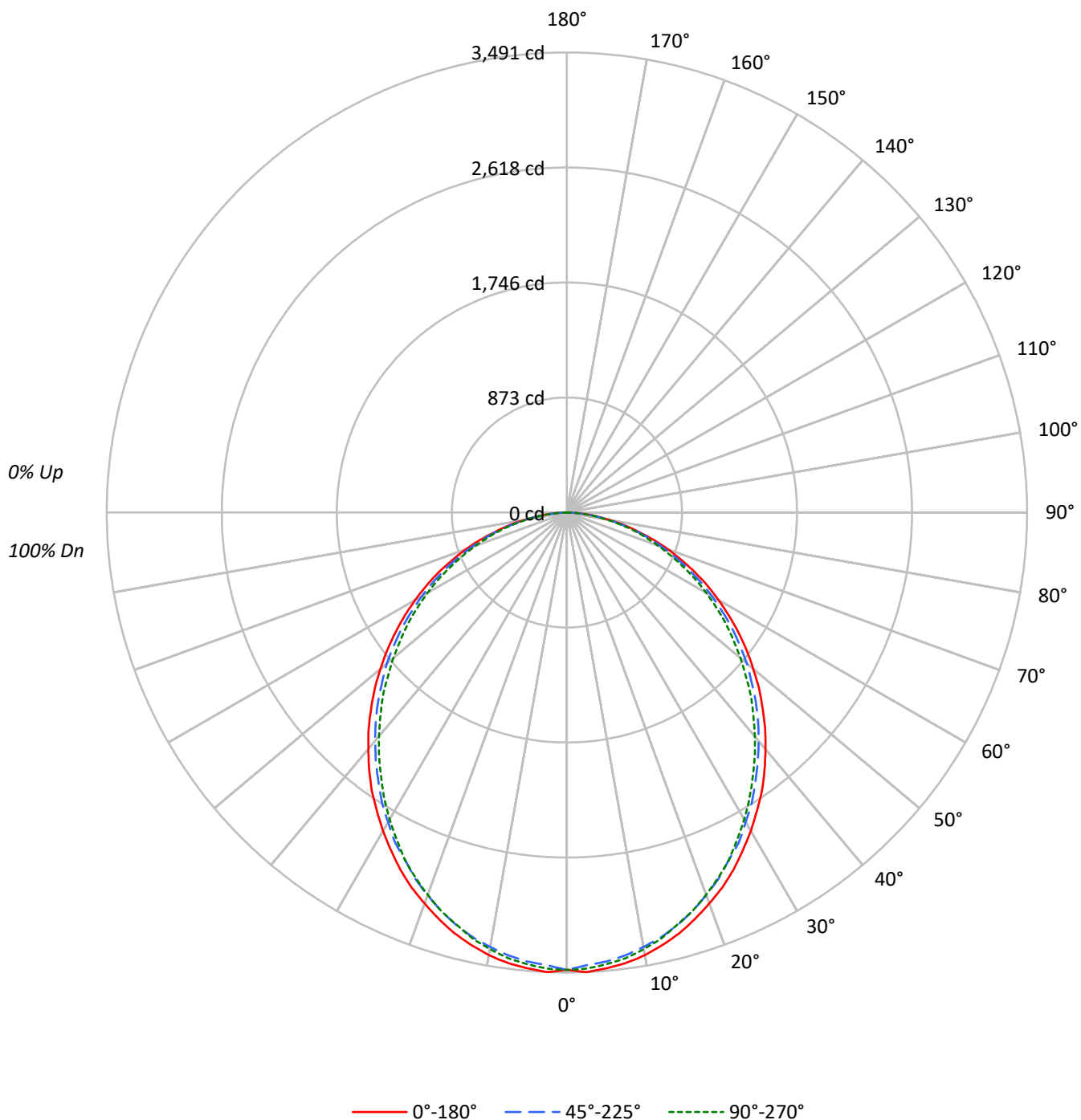
Lumens per Lamp: N/A
Luminaire Lumens: 8830.8 lumens
Efficiency: N/A
Efficacy: 84.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 104.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9781
Total Harmonic Distortion (THDi): 0.075
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P931025

CATALOG NUMBER: DFN2DS-SQ3F0-100DS940-FLL

Luminous Intensity Polar Plot



TEST NUMBER: P931025

CATALOG NUMBER: DFN2DS-SQ3F0-100DS940-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°	3977	3977	3977
5°	3992	3935	3958
10°	3969	3895	3914
15°	3919	3844	3840
20°	3850	3768	3764
25°	3780	3675	3675
30°	3692	3590	3559
35°	3609	3487	3436
40°	3505	3384	3320
45°	3402	3282	3202
50°	3290	3177	3064
55°	3174	3054	2941
60°	3044	2906	2799
65°	2905	2760	2633
70°	2728	2583	2460
75°	2481	2378	2320
80°	2203	2135	2026
85°	1797	1713	1537

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3402 cd/sqm

TEST NUMBER: P931025

CATALOG NUMBER: DFN2DS-SQ3F0-100DS940-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	326.7	3.7
10°-20°	919.1	10.4
20°-30°	1350.8	15.3
30°-40°	1568.8	17.8
40°-50°	1566.9	17.7
50°-60°	1366.3	15.5
60°-70°	1010.0	11.4
70°-80°	571.4	6.5
80°-90°	150.8	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°	2596.6	29.4
0°-40°	4165.4	47.2
0°-60°	7098.5	80.4
0°-90°	8830.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8830.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3471	3471	3471	3471	3471	
5°	3471	3458	3421	3448	3441	329
15°	3304	3284	3241	3254	3238	931
25°	2990	2964	2907	2914	2907	1376
35°	2580	2547	2493	2473	2456	1611
45°	2099	2076	2026	1989	1976	1620
55°	1589	1569	1529	1489	1472	1420
65°	1072	1051	1018	988	971	1059
75°	560	554	537	517	524	598
85°	137	134	130	120	117	161
90°	0	0	0	0	0	

TEST NUMBER: P931025

CATALOG NUMBER: DFN2DS-SQ3F0-100DS940-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3470.9	3470.9	3470.9	3470.9	3470.9
2.5°	3491.0	3474.3	3437.5	3470.9	3464.4
5°	3470.9	3457.7	3420.9	3447.5	3441.1
7.5°	3447.5	3427.6	3390.8	3417.7	3411.0
10°	3411.0	3387.6	3347.6	3374.2	3364.3
12.5°	3360.7	3340.9	3300.8	3317.5	3310.7
15°	3304.1	3284.3	3240.6	3254.1	3237.5
17.5°	3233.9	3214.1	3170.5	3187.2	3170.5
20°	3157.1	3137.3	3090.5	3100.4	3087.3
22.5°	3080.6	3050.6	3006.9	3006.9	3000.2
25°	2990.3	2963.8	2907.1	2913.5	2907.1
27.5°	2890.1	2866.7	2823.5	2813.6	2797.0
30°	2790.3	2763.3	2713.4	2703.5	2690.0
32.5°	2683.3	2663.5	2610.0	2589.8	2576.4
35°	2579.9	2546.7	2493.1	2473.0	2456.3
37.5°	2463.1	2432.9	2379.5	2356.1	2339.4
40°	2343.0	2316.1	2262.6	2232.9	2219.5
42.5°	2226.2	2199.2	2146.2	2112.5	2092.7
45°	2099.4	2076.0	2025.7	1989.2	1975.9
47.5°	1975.9	1952.5	1899.0	1862.1	1842.3
50°	1845.5	1828.9	1782.1	1735.4	1718.8
52.5°	1718.8	1695.4	1652.2	1615.4	1592.0
55°	1588.8	1568.7	1528.6	1488.6	1472.0
57.5°	1458.5	1441.8	1398.3	1358.3	1344.9
60°	1328.2	1315.1	1268.3	1231.5	1221.6
62.5°	1201.4	1178.1	1144.8	1111.5	1098.1
65°	1071.5	1051.3	1018.0	987.9	971.3
67.5°	938.0	921.0	891.3	867.9	854.4
70°	814.4	800.9	770.9	747.5	734.4
72.5°	687.6	674.2	657.6	634.2	624.2
75°	560.5	554.2	537.2	517.4	524.0
77.5°	447.2	433.8	427.0	417.1	407.2
80°	333.9	330.4	323.6	313.7	307.0
82.5°	227.0	227.0	223.8	210.3	210.3
85°	136.7	133.5	130.3	120.1	116.9
87.5°	60.2	53.4	46.7	36.8	33.3
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P931025

CATALOG NUMBER: DFN2DS-SQ3F0-100DS940-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	16.08	17.69	16.44	18.00	18.32	15.63	17.25	16.00	17.56	17.87
	3H	17.83	19.28	18.21	19.61	19.97	17.34	18.79	17.71	19.12	19.48
	4H	18.48	19.84	18.87	20.19	20.57	17.98	19.35	18.38	19.70	20.07
	6H	18.94	20.21	19.36	20.58	20.97	18.44	19.71	18.85	20.08	20.47
	8H	19.09	20.30	19.51	20.69	21.09	18.58	19.80	19.01	20.18	20.58
	12H	19.18	20.34	19.61	20.72	21.15	18.67	19.83	19.10	20.21	20.64
4H	2H	16.64	18.01	17.04	18.36	18.73	16.29	17.66	16.68	18.00	18.38
	3H	18.61	19.76	19.02	20.16	20.56	18.21	19.35	18.62	19.75	20.15
	4H	19.39	20.43	19.82	20.84	21.28	18.97	20.00	19.40	20.42	20.85
	6H	19.99	20.89	20.44	21.33	21.79	19.56	20.46	20.01	20.90	21.36
	8H	20.18	21.02	20.64	21.47	21.93	19.74	20.59	20.20	21.03	21.49
	12H	20.31	21.07	20.79	21.54	22.01	19.86	20.62	20.34	21.09	21.56
8H	4H	19.66	20.51	20.12	20.95	21.42	19.29	20.14	19.75	20.58	21.04
	6H	20.38	21.08	20.87	21.57	22.05	20.00	20.70	20.49	21.19	21.66
	8H	20.64	21.27	21.15	21.78	22.26	20.25	20.88	20.76	21.38	21.87
	12H	20.84	21.40	21.34	21.89	22.45	20.42	20.98	20.93	21.47	22.03
12H	4H	19.69	20.45	20.17	20.93	21.40	19.33	20.09	19.81	20.56	21.03
	6H	20.42	21.06	20.93	21.56	22.05	20.06	20.69	20.56	21.19	21.68
	8H	20.74	21.30	21.24	21.79	22.35	20.36	20.92	20.87	21.41	21.97