

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: P930842

Luminaire Tested: DFN2DS-SQ2F0-050DS930-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930842
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-SQ2F0-050DS930-RLL
Description: 2 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

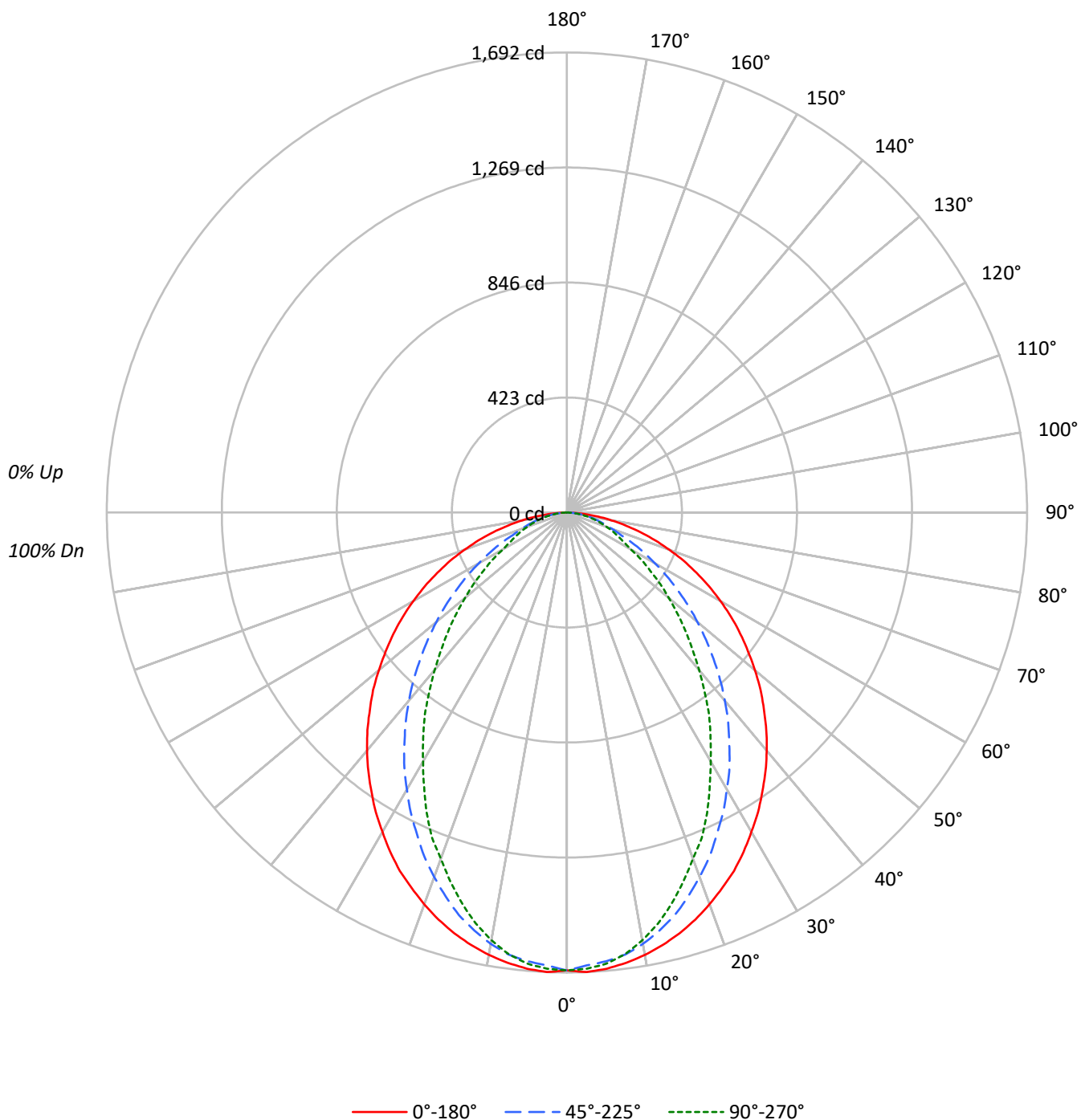
Lumens per Lamp: N/A
Luminaire Lumens: 3463.8 lumens
Efficiency: N/A
Efficacy: 72.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.21' x L: 2.21' x H: 0')
CIE Type: Direct

Input Watts (W): 47.9
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: P930842

CATALOG NUMBER: DFN2DS-SQ2F0-050DS930-RLL

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
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°	3703	3703	3703
5°	3718	3657	3677
10°	3689	3597	3566
15°	3647	3490	3390
20°	3588	3338	3170
25°	3528	3165	2958
30°	3444	2987	2686
35°	3363	2795	2447
40°	3281	2594	2170
45°	3185	2370	1919
50°	3087	2143	1674
55°	2986	1899	1438
60°	2869	1642	1193
65°	2736	1380	1086
70°	2577	1137	999
75°	2382	1036	933
80°	2103	926	850
85°	1653	729	729

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3185 cd/sqm

TEST NUMBER: P930842

CATALOG NUMBER: DFN2DS-SQ2F0-050DS930-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.8	4.6
10°-20°	433.3	12.5
20°-30°	608.4	17.6
30°-40°	663.2	19.1
40°-50°	609.5	17.6
50°-60°	478.7	13.8
60°-70°	311.6	9.0
70°-80°	160.4	4.6
80°-90°	40.9	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°	1199.5	34.6
0°-40°	1862.7	53.8
0°-60°	2950.9	85.2
0°-90°	3463.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3463.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1684	1684	1684	1684	1684	
5°	1684	1677	1657	1670	1666	160
15°	1602	1585	1533	1504	1489	451
25°	1454	1405	1305	1242	1219	669
35°	1253	1175	1041	945	911	784
45°	1024	922	762	654	617	791
55°	779	660	495	404	375	696
65°	526	402	265	213	209	521
75°	280	174	122	111	110	297
85°	66	34	29	29	29	79
90°	0	0	0	0	0	

TEST NUMBER: P930842

CATALOG NUMBER: DFN2DS-SQ2F0-050DS930-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1684.2	1684.2	1684.2	1684.2	1684.2
2.5°	1691.8	1684.2	1667.4	1682.7	1679.6
5°	1684.2	1676.6	1656.7	1670.4	1665.9
7.5°	1670.4	1661.4	1640.0	1646.1	1638.4
10°	1652.2	1641.5	1611.1	1606.4	1597.3
12.5°	1629.3	1615.7	1574.4	1565.4	1548.5
15°	1601.9	1585.1	1533.3	1504.4	1489.2
17.5°	1569.9	1545.5	1481.4	1447.9	1423.5
20°	1533.3	1502.8	1426.6	1388.6	1354.9
22.5°	1493.7	1458.6	1370.2	1318.4	1295.6
25°	1454.0	1405.2	1304.7	1242.2	1219.2
27.5°	1406.9	1354.9	1243.7	1172.1	1137.0
30°	1356.6	1298.5	1176.6	1098.9	1057.7
32.5°	1307.7	1237.6	1112.7	1021.2	983.1
35°	1252.9	1175.1	1041.1	945.0	911.4
37.5°	1199.5	1115.7	974.0	868.7	830.7
40°	1143.1	1051.8	903.8	795.6	756.0
42.5°	1085.3	987.7	833.7	720.9	682.9
45°	1024.3	922.1	762.1	653.8	617.2
47.5°	966.3	858.2	693.6	585.3	551.8
50°	902.4	794.1	626.5	521.2	489.3
52.5°	839.8	725.4	562.4	461.9	432.9
55°	778.8	659.9	495.3	403.9	375.0
57.5°	716.4	594.5	435.9	350.6	326.2
60°	652.3	530.4	373.4	295.8	271.3
62.5°	589.9	468.0	320.1	246.9	234.8
65°	525.8	402.4	265.2	213.4	208.8
67.5°	464.9	341.4	213.4	187.4	182.9
70°	400.9	282.0	176.8	161.5	155.4
72.5°	339.9	227.1	147.8	135.7	132.6
75°	280.4	173.7	121.9	111.2	109.8
77.5°	221.0	123.4	96.1	89.9	86.8
80°	166.1	88.4	73.1	67.1	67.1
82.5°	115.8	59.5	50.3	47.2	47.2
85°	65.5	33.5	28.9	28.9	28.9
87.5°	24.4	12.1	12.1	10.7	10.7
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930842

CATALOG NUMBER: DFN2DS-SQ2F0-050DS930-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	15.78	17.31	16.15	17.62	17.93	11.74	13.27	12.11	13.58	13.89
	3H	17.55	18.91	17.93	19.24	19.60	13.01	14.37	13.39	14.70	15.06
	4H	18.22	19.50	18.62	19.84	20.22	13.51	14.79	13.91	15.14	15.52
	6H	18.70	19.89	19.12	20.25	20.65	13.89	15.07	14.30	15.44	15.83
	8H	18.87	20.00	19.30	20.39	20.79	14.02	15.14	14.44	15.53	15.93
	12H	18.97	20.05	19.40	20.43	20.86	14.10	15.18	14.53	15.56	15.99
4H	2H	15.89	17.17	16.29	17.52	17.90	12.44	13.72	12.84	14.07	14.45
	3H	17.82	18.88	18.23	19.28	19.68	13.88	14.95	14.29	15.35	15.75
	4H	18.57	19.53	19.00	19.94	20.38	14.48	15.44	14.91	15.85	16.29
	6H	19.16	19.99	19.62	20.44	20.90	14.97	15.80	15.43	16.24	16.70
	8H	19.38	20.15	19.84	20.60	21.07	15.13	15.91	15.60	16.35	16.82
	12H	19.53	20.22	20.01	20.70	21.17	15.25	15.94	15.73	16.42	16.89
8H	4H	18.59	19.37	19.06	19.82	20.28	14.84	15.61	15.30	16.06	16.52
	6H	19.23	19.87	19.73	20.37	20.84	15.42	16.06	15.92	16.56	17.03
	8H	19.48	20.06	20.00	20.57	21.06	15.64	16.22	16.16	16.73	17.22
	12H	19.69	20.20	20.20	20.69	21.25	15.82	16.33	16.33	16.82	17.39
12H	4H	18.58	19.27	19.06	19.75	20.22	14.88	15.57	15.36	16.05	16.52
	6H	19.21	19.79	19.73	20.30	20.79	15.49	16.06	16.00	16.57	17.06
	8H	19.50	20.01	20.01	20.50	21.06	15.76	16.27	16.27	16.76	17.33