

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: P930843

Luminaire Tested: DFN2DS-SQ2F0-050DS935-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930843
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-SQ2F0-050DS935-FLL
Description: 2 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

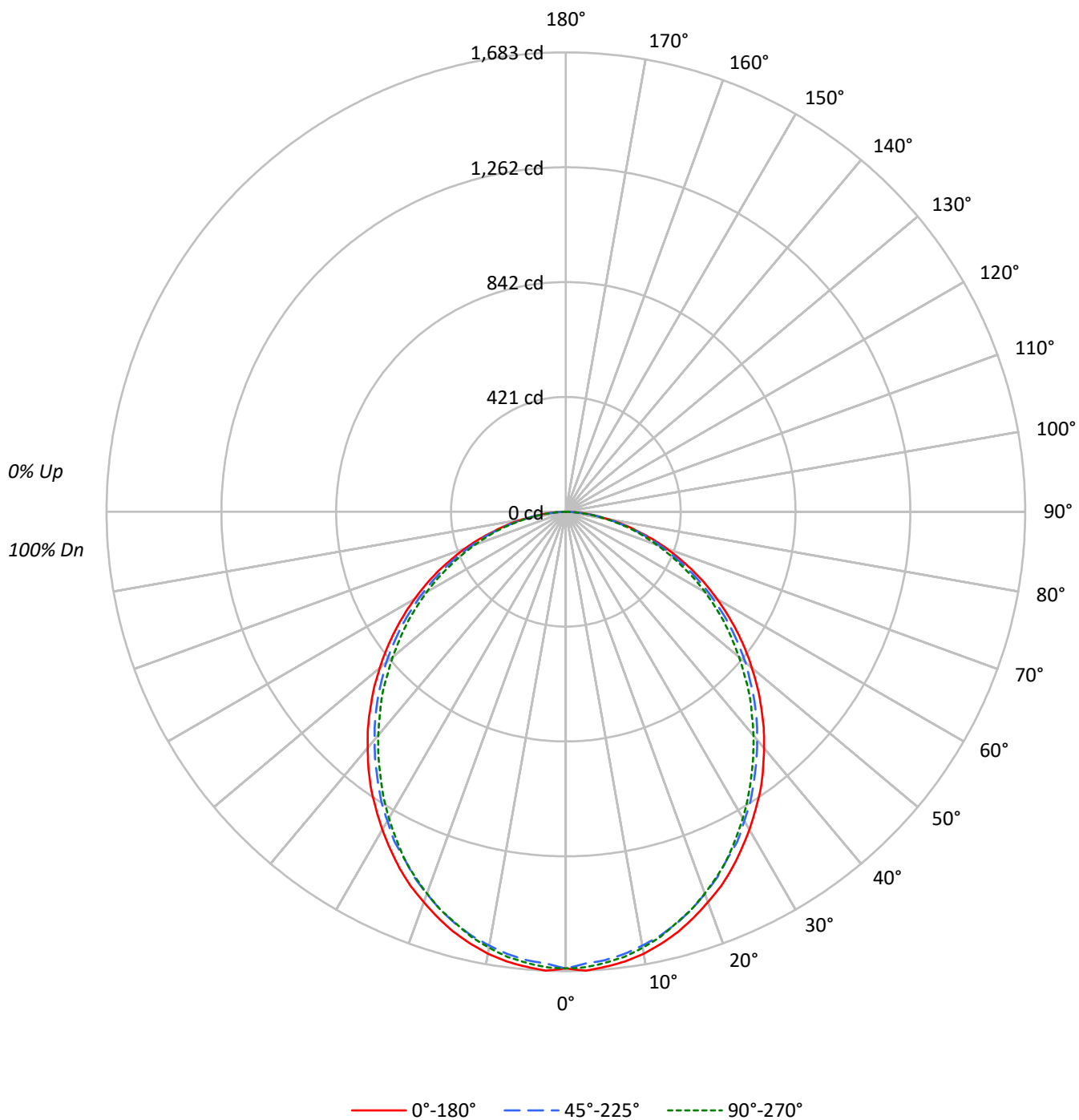
Lumens per Lamp: N/A
Luminaire Lumens: 4257.0 lumens
Efficiency: N/A
Efficacy: 88.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.21' x L: 2.21' x H: 0')
CIE Type: Direct

Input Watts (W): 47.9
Input Voltage (V): 120
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: P930843

CATALOG NUMBER: DFN2DS-SQ2F0-050DS935-FLL

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			0
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50	30	10	0
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90	88	86	84
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80	76	73	71
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63	58	54	51
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57	51	47	45
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52	46	41	39
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47	41	37	35
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44	38	33	31
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37	32	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3679	3679	3679
5°	3693	3640	3662
10°	3671	3603	3621
15°	3626	3556	3553
20°	3561	3486	3483
25°	3497	3400	3400
30°	3415	3321	3293
35°	3338	3226	3179
40°	3242	3131	3071
45°	3147	3037	2962
50°	3044	2939	2834
55°	2936	2825	2720
60°	2816	2689	2590
65°	2687	2553	2436
70°	2524	2389	2277
75°	2296	2200	2147
80°	2039	1975	1874
85°	1663	1584	1420

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3147 cd/sqm

TEST NUMBER: P930843

CATALOG NUMBER: DFN2DS-SQ2F0-050DS935-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.5	3.7
10°-20°	443.1	10.4
20°-30°	651.1	15.3
30°-40°	756.3	17.8
40°-50°	755.3	17.7
50°-60°	658.6	15.5
60°-70°	486.9	11.4
70°-80°	275.5	6.5
80°-90°	72.7	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°	1251.7	29.4
0°-40°	2008.0	47.2
0°-60°	3421.9	80.4
0°-90°	4257.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4257.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1673	1673	1673	1673	1673	
5°	1673	1667	1649	1662	1659	159
15°	1593	1583	1562	1569	1561	449
25°	1442	1429	1401	1404	1401	663
35°	1244	1228	1202	1192	1184	777
45°	1012	1001	976	959	952	781
55°	766	756	737	718	710	685
65°	516	507	491	476	468	511
75°	270	267	259	249	253	288
85°	66	64	63	58	56	77
90°	0	0	0	0	0	

TEST NUMBER: P930843

CATALOG NUMBER: DFN2DS-SQ2F0-050DS935-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1673.1	1673.1	1673.1	1673.1	1673.1
2.5°	1682.8	1674.8	1657.1	1673.1	1670.1
5°	1673.1	1666.9	1649.0	1661.9	1658.9
7.5°	1661.9	1652.3	1634.6	1647.6	1644.3
10°	1644.3	1633.1	1613.8	1626.5	1621.8
12.5°	1620.1	1610.5	1591.3	1599.3	1596.0
15°	1592.7	1583.2	1562.2	1568.7	1560.6
17.5°	1558.9	1549.4	1528.4	1536.4	1528.4
20°	1521.9	1512.4	1489.9	1494.6	1488.3
22.5°	1485.0	1470.5	1449.5	1449.5	1446.3
25°	1441.5	1428.7	1401.4	1404.5	1401.4
27.5°	1393.2	1381.9	1361.1	1356.3	1348.3
30°	1345.0	1332.1	1308.1	1303.2	1296.8
32.5°	1293.5	1284.0	1258.2	1248.5	1242.0
35°	1243.6	1227.6	1201.8	1192.1	1184.1
37.5°	1187.3	1172.9	1147.1	1135.8	1127.8
40°	1129.5	1116.5	1090.7	1076.4	1069.9
42.5°	1073.2	1060.2	1034.6	1018.3	1008.8
45°	1012.0	1000.8	976.5	959.0	952.4
47.5°	952.4	941.2	915.5	897.7	888.1
50°	889.7	881.7	859.1	836.6	828.5
52.5°	828.5	817.3	796.4	778.7	767.5
55°	765.9	756.2	736.8	717.6	709.6
57.5°	703.0	695.1	674.1	654.8	648.3
60°	640.3	634.0	611.5	593.7	588.9
62.5°	579.2	567.9	551.9	535.8	529.3
65°	516.5	506.8	490.7	476.3	468.2
67.5°	452.2	444.0	429.7	418.4	411.9
70°	392.6	386.1	371.6	360.3	354.1
72.5°	331.5	325.0	317.0	305.7	300.9
75°	270.2	267.1	258.9	249.4	252.7
77.5°	215.6	209.1	205.9	201.1	196.3
80°	161.0	159.3	156.0	151.3	148.0
82.5°	109.4	109.4	107.8	101.4	101.4
85°	65.9	64.3	62.8	57.9	56.3
87.5°	29.0	25.8	22.5	17.7	16.1
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930843

CATALOG NUMBER: DFN2DS-SQ2F0-050DS935-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	15.81	17.42	16.17	17.73	18.05	15.36	16.97	15.73	17.29	17.60
	3H	17.56	19.01	17.94	19.34	19.70	17.07	18.52	17.44	18.85	19.21
	4H	18.20	19.57	18.60	19.92	20.30	17.71	19.08	18.11	19.43	19.80
	6H	18.67	19.94	19.09	20.31	20.70	18.17	19.44	18.58	19.81	20.20
	8H	18.82	20.03	19.24	20.42	20.82	18.31	19.53	18.74	19.91	20.31
	12H	18.91	20.07	19.34	20.45	20.88	18.40	19.56	18.82	19.94	20.37
4H	2H	16.37	17.74	16.77	18.09	18.46	16.02	17.39	16.41	17.73	18.11
	3H	18.34	19.49	18.75	19.89	20.29	17.94	19.08	18.35	19.48	19.88
	4H	19.12	20.16	19.55	20.57	21.01	18.70	19.73	19.13	20.15	20.58
	6H	19.72	20.62	20.17	21.06	21.52	19.29	20.19	19.74	20.63	21.09
	8H	19.91	20.75	20.37	21.20	21.66	19.47	20.32	19.93	20.76	21.22
	12H	20.04	20.80	20.52	21.27	21.74	19.59	20.35	20.07	20.82	21.29
8H	4H	19.39	20.24	19.85	20.68	21.15	19.02	19.87	19.48	20.31	20.77
	6H	20.11	20.81	20.60	21.30	21.78	19.73	20.43	20.22	20.92	21.39
	8H	20.37	21.00	20.88	21.50	21.99	19.98	20.61	20.49	21.11	21.60
	12H	20.57	21.12	21.07	21.62	22.18	20.15	20.71	20.66	21.20	21.76
12H	4H	19.42	20.18	19.90	20.66	21.12	19.06	19.82	19.54	20.29	20.76
	6H	20.15	20.79	20.66	21.29	21.78	19.79	20.42	20.29	20.92	21.41
	8H	20.47	21.03	20.97	21.52	22.08	20.09	20.65	20.60	21.14	21.70