

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: P930938

Luminaire Tested: DFN2DS-SQ3F0-050DS950-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930938
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-SQ3F0-050DS950-RLL
Description: 3 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

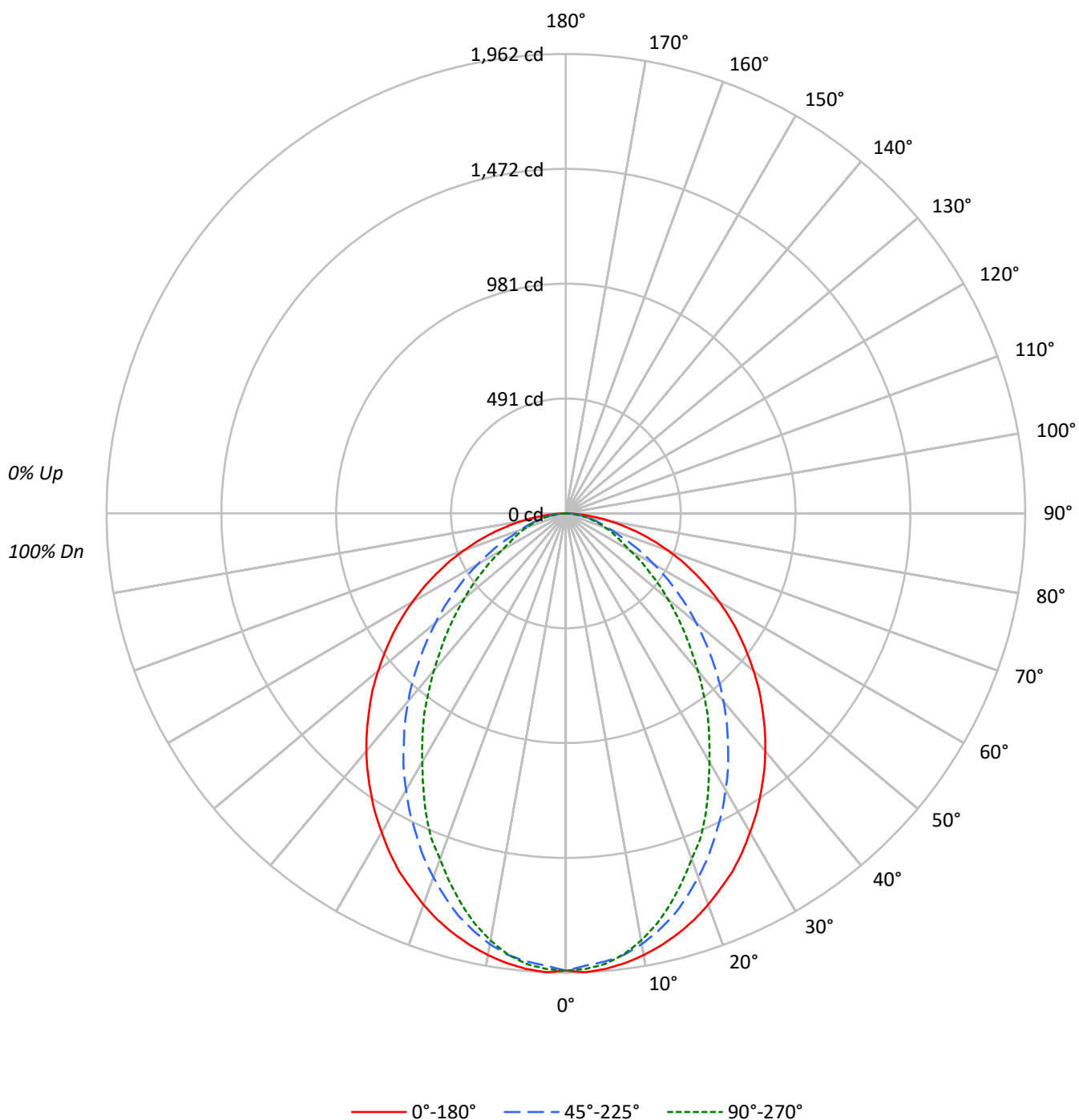
Lumens per Lamp: N/A
Luminaire Lumens: 4016.3 lumens
Efficiency: N/A
Efficacy: 83.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 48
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9789
Total Harmonic Distortion (THDi): 0.074
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930938

CATALOG NUMBER: DFN2DS-SQ3F0-050DS950-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P930938

CATALOG NUMBER: DFN2DS-SQ3F0-050DS950-RLL

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°	2238	2238	2238
5°	2246	2209	2222
10°	2229	2173	2155
15°	2203	2109	2048
20°	2168	2017	1916
25°	2132	1913	1787
30°	2081	1805	1623
35°	2032	1688	1478
40°	1983	1567	1311
45°	1925	1432	1160
50°	1865	1295	1011
55°	1804	1147	869
60°	1733	992	721
65°	1653	834	656
70°	1557	687	604
75°	1440	626	564
80°	1271	560	513
85°	999	440	440

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1925 cd/sqm

TEST NUMBER: P930938

CATALOG NUMBER: DFN2DS-SQ3F0-050DS950-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	183.0	4.6
10°-20°	502.4	12.5
20°-30°	705.4	17.6
30°-40°	768.9	19.1
40°-50°	706.7	17.6
50°-60°	555.0	13.8
60°-70°	361.3	9.0
70°-80°	186.0	4.6
80°-90°	47.5	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°	1390.9	34.6
0°-40°	2159.8	53.8
0°-60°	3421.5	85.2
0°-90°	4016.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4016.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1953	1953	1953	1953	1953	
5°	1953	1944	1921	1937	1932	185
15°	1857	1838	1778	1744	1727	523
25°	1686	1629	1513	1440	1414	775
35°	1453	1363	1207	1096	1057	909
45°	1188	1069	884	758	716	917
55°	903	765	574	468	435	807
65°	610	466	308	248	242	604
75°	325	201	141	129	127	344
85°	76	39	34	34	34	91
90°	0	0	0	0	0	

TEST NUMBER: P930938

CATALOG NUMBER: DFN2DS-SQ3F0-050DS950-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1952.8	1952.8	1952.8	1952.8	1952.8
2.5°	1961.6	1952.8	1933.4	1951.1	1947.6
5°	1952.8	1944.1	1921.0	1936.9	1931.7
7.5°	1936.9	1926.4	1901.6	1908.6	1899.7
10°	1915.7	1903.3	1868.1	1862.7	1852.1
12.5°	1889.2	1873.4	1825.6	1815.1	1795.5
15°	1857.4	1837.9	1777.9	1744.4	1726.7
17.5°	1820.3	1792.0	1717.7	1678.9	1650.5
20°	1777.9	1742.5	1654.1	1610.1	1571.1
22.5°	1732.0	1691.3	1588.7	1528.7	1502.3
25°	1686.0	1629.4	1512.8	1440.4	1413.7
27.5°	1631.3	1571.1	1442.1	1359.0	1318.4
30°	1573.0	1505.7	1364.3	1274.2	1226.4
32.5°	1516.3	1435.0	1290.2	1184.1	1139.9
35°	1452.7	1362.6	1207.1	1095.7	1056.8
37.5°	1390.9	1293.6	1129.4	1007.3	963.2
40°	1325.5	1219.5	1047.9	922.5	876.6
42.5°	1258.4	1145.2	966.7	835.9	791.8
45°	1187.7	1069.2	883.7	758.1	715.6
47.5°	1120.5	995.1	804.2	678.6	639.8
50°	1046.3	920.8	726.4	604.3	567.4
52.5°	973.7	841.1	652.1	535.5	502.0
55°	903.0	765.2	574.3	468.3	434.8
57.5°	830.7	689.3	505.5	406.5	378.2
60°	756.4	615.0	432.9	342.9	314.6
62.5°	684.0	542.6	371.1	286.3	272.3
65°	609.7	466.5	307.5	247.5	242.1
67.5°	539.0	395.9	247.5	217.4	212.1
70°	464.8	327.0	205.0	187.3	180.2
72.5°	394.2	263.3	171.4	157.3	153.8
75°	325.2	201.4	141.4	129.0	127.3
77.5°	256.3	143.1	111.4	104.2	100.6
80°	192.6	102.5	84.8	77.8	77.8
82.5°	134.3	69.0	58.3	54.7	54.7
85°	76.0	38.8	33.5	33.5	33.5
87.5°	28.4	14.1	14.1	12.4	12.4
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930938

CATALOG NUMBER: DFN2DS-SQ3F0-050DS950-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	14.03	15.55	14.40	15.87	16.18	9.99	11.52	10.36	11.83	12.14
	3H	15.80	17.16	16.18	17.49	17.85	11.26	12.62	11.64	12.95	13.31
	4H	16.46	17.75	16.86	18.09	18.47	11.76	13.04	12.16	13.39	13.77
	6H	16.95	18.14	17.37	18.50	18.90	12.14	13.32	12.55	13.69	14.08
	8H	17.12	18.25	17.55	18.64	19.04	12.27	13.39	12.69	13.78	14.18
	12H	17.22	18.30	17.65	18.68	19.11	12.35	13.42	12.78	13.81	14.24
4H	2H	14.14	15.42	14.54	15.77	16.15	10.69	11.97	11.09	12.32	12.70
	3H	16.07	17.13	16.48	17.53	17.93	12.13	13.20	12.54	13.59	14.00
	4H	16.82	17.78	17.25	18.19	18.63	12.73	13.69	13.16	14.10	14.54
	6H	17.41	18.24	17.87	18.69	19.15	13.22	14.05	13.68	14.49	14.95
	8H	17.63	18.40	18.09	18.85	19.32	13.38	14.16	13.84	14.60	15.07
	12H	17.78	18.47	18.26	18.95	19.42	13.50	14.19	13.98	14.67	15.14
8H	4H	16.84	17.62	17.31	18.07	18.53	13.09	13.86	13.55	14.31	14.77
	6H	17.48	18.12	17.98	18.62	19.09	13.67	14.31	14.17	14.81	15.28
	8H	17.73	18.31	18.25	18.82	19.31	13.89	14.47	14.41	14.98	15.47
	12H	17.94	18.45	18.45	18.94	19.50	14.07	14.58	14.58	15.07	15.64
12H	4H	16.83	17.52	17.31	18.00	18.47	13.13	13.82	13.61	14.30	14.77
	6H	17.46	18.04	17.98	18.55	19.04	13.74	14.31	14.25	14.82	15.31
	8H	17.75	18.26	18.26	18.75	19.31	14.01	14.52	14.52	15.01	15.57