

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: P930952

Luminaire Tested: DFN2DS-SQ3F0-060DS935-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930952
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-SQ3F0-060DS935-RLL
Description: 3 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

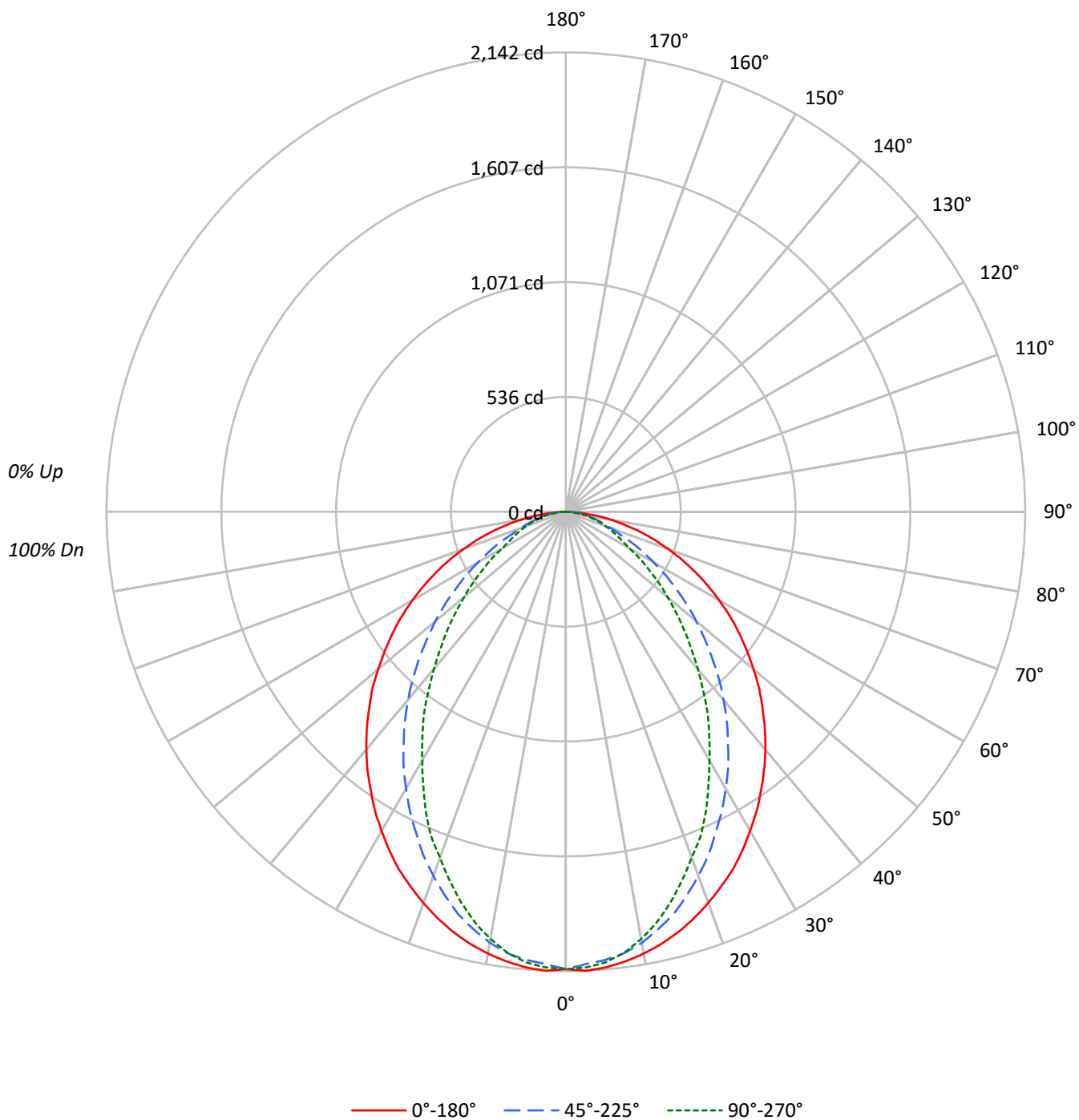
Lumens per Lamp: N/A
Luminaire Lumens: 4386.0 lumens
Efficiency: N/A
Efficacy: 74.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 59.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9971
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: P930952

CATALOG NUMBER: DFN2DS-SQ3F0-060DS935-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P930952

CATALOG NUMBER: DFN2DS-SQ3F0-060DS935-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°	2444	2444	2444
5°	2453	2413	2426
10°	2434	2374	2353
15°	2406	2303	2237
20°	2367	2203	2092
25°	2328	2089	1952
30°	2273	1971	1772
35°	2219	1844	1614
40°	2165	1712	1432
45°	2102	1564	1267
50°	2037	1414	1104
55°	1970	1253	948
60°	1893	1083	787
65°	1805	910	717
70°	1701	750	659
75°	1572	684	616
80°	1388	610	561
85°	1090	481	481

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 2102 cd/sqm

TEST NUMBER: P930952

CATALOG NUMBER: DFN2DS-SQ3F0-060DS935-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	199.9	4.6
10°-20°	548.7	12.5
20°-30°	770.3	17.6
30°-40°	839.7	19.1
40°-50°	771.8	17.6
50°-60°	606.1	13.8
60°-70°	394.5	9.0
70°-80°	203.1	4.6
80°-90°	51.8	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°	1518.9	34.6
0°-40°	2358.6	53.8
0°-60°	3736.5	85.2
0°-90°	4386.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4386.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2133	2133	2133	2133	2133	
5°	2133	2123	2098	2115	2110	202
15°	2028	2007	1942	1905	1886	572
25°	1841	1779	1652	1573	1544	847
35°	1586	1488	1318	1197	1154	993
45°	1297	1168	965	828	782	1002
55°	986	836	627	512	475	881
65°	666	510	336	270	264	660
75°	355	220	154	141	139	376
85°	83	42	37	37	37	99
90°	0	0	0	0	0	

TEST NUMBER: P930952

CATALOG NUMBER: DFN2DS-SQ3F0-060DS935-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2132.6	2132.6	2132.6	2132.6	2132.6
2.5°	2142.3	2132.6	2111.3	2130.7	2126.9
5°	2132.6	2123.0	2097.8	2115.3	2109.5
7.5°	2115.3	2103.7	2076.7	2084.3	2074.7
10°	2092.0	2078.5	2040.1	2034.2	2022.6
12.5°	2063.2	2045.8	1993.6	1982.1	1960.8
15°	2028.4	2007.1	1941.5	1904.9	1885.6
17.5°	1987.9	1956.9	1875.8	1833.4	1802.6
20°	1941.5	1902.8	1806.4	1758.3	1715.7
22.5°	1891.4	1846.9	1735.0	1669.4	1640.5
25°	1841.3	1779.4	1652.1	1573.0	1544.0
27.5°	1781.5	1715.7	1574.8	1484.1	1439.7
30°	1717.8	1644.2	1489.9	1391.6	1339.4
32.5°	1655.9	1567.1	1409.0	1293.1	1244.8
35°	1586.5	1488.1	1318.3	1196.6	1154.0
37.5°	1518.9	1412.6	1233.3	1100.0	1051.9
40°	1447.5	1331.8	1144.4	1007.4	957.3
42.5°	1374.2	1250.7	1055.7	912.8	864.7
45°	1297.0	1167.5	965.1	827.8	781.6
47.5°	1223.7	1086.7	878.2	741.1	698.7
50°	1142.6	1005.6	793.3	660.0	619.6
52.5°	1063.3	918.6	712.2	584.8	548.2
55°	986.2	835.7	627.2	511.5	474.8
57.5°	907.1	752.7	552.0	443.9	413.0
60°	826.0	671.7	472.8	374.5	343.6
62.5°	747.0	592.6	405.2	312.7	297.3
65°	665.9	509.5	335.8	270.3	264.4
67.5°	588.7	432.2	270.3	237.4	231.6
70°	507.6	357.1	223.8	204.6	196.8
72.5°	430.4	287.5	187.1	171.8	167.9
75°	355.1	219.9	154.4	140.9	139.1
77.5°	279.9	156.3	121.6	113.9	110.0
80°	210.3	112.0	92.5	85.0	85.0
82.5°	146.6	75.3	63.6	59.8	59.8
85°	82.9	42.4	36.6	36.6	36.6
87.5°	31.0	15.4	15.4	13.5	13.5
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930952

CATALOG NUMBER: DFN2DS-SQ3F0-060DS935-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	14.34	15.86	14.70	16.17	16.49	10.30	11.82	10.66	12.13	12.45
	3H	16.10	17.47	16.48	17.80	18.16	11.56	12.93	11.94	13.26	13.62
	4H	16.77	18.05	17.17	18.40	18.78	12.07	13.35	12.47	13.70	14.07
	6H	17.26	18.44	17.67	18.81	19.20	12.45	13.63	12.86	14.00	14.39
	8H	17.42	18.55	17.85	18.94	19.34	12.57	13.70	13.00	14.09	14.49
	12H	17.53	18.61	17.96	18.99	19.42	12.65	13.73	13.08	14.11	14.54
4H	2H	14.44	15.72	14.84	16.07	16.45	10.99	12.28	11.39	12.62	13.00
	3H	16.38	17.44	16.79	17.84	18.24	12.44	13.50	12.85	13.90	14.30
	4H	17.13	18.08	17.56	18.50	18.94	13.04	13.99	13.47	14.41	14.85
	6H	17.72	18.55	18.17	18.99	19.45	13.53	14.36	13.98	14.80	15.26
	8H	17.93	18.71	18.40	19.15	19.62	13.69	14.47	14.15	14.91	15.38
	12H	18.09	18.78	18.57	19.26	19.73	13.81	14.50	14.29	14.98	15.45
8H	4H	17.15	17.93	17.61	18.37	18.84	13.39	14.17	13.85	14.61	15.08
	6H	17.79	18.43	18.28	18.92	19.40	13.98	14.62	14.48	15.11	15.59
	8H	18.04	18.61	18.55	19.12	19.61	14.20	14.78	14.71	15.29	15.77
	12H	18.24	18.75	18.75	19.24	19.81	14.38	14.89	14.89	15.38	15.94
12H	4H	17.13	17.83	17.62	18.31	18.78	13.43	14.13	13.92	14.61	15.08
	6H	17.77	18.35	18.28	18.86	19.34	14.04	14.62	14.56	15.13	15.62
	8H	18.05	18.56	18.56	19.05	19.62	14.31	14.82	14.82	15.32	15.88

END OF REPORT

FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE

7 of 7