

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: P930864

Luminaire Tested: DFN2DS-SQ2F0-060DS940-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930864
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-SQ2F0-060DS940-RLL
Description: 2 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

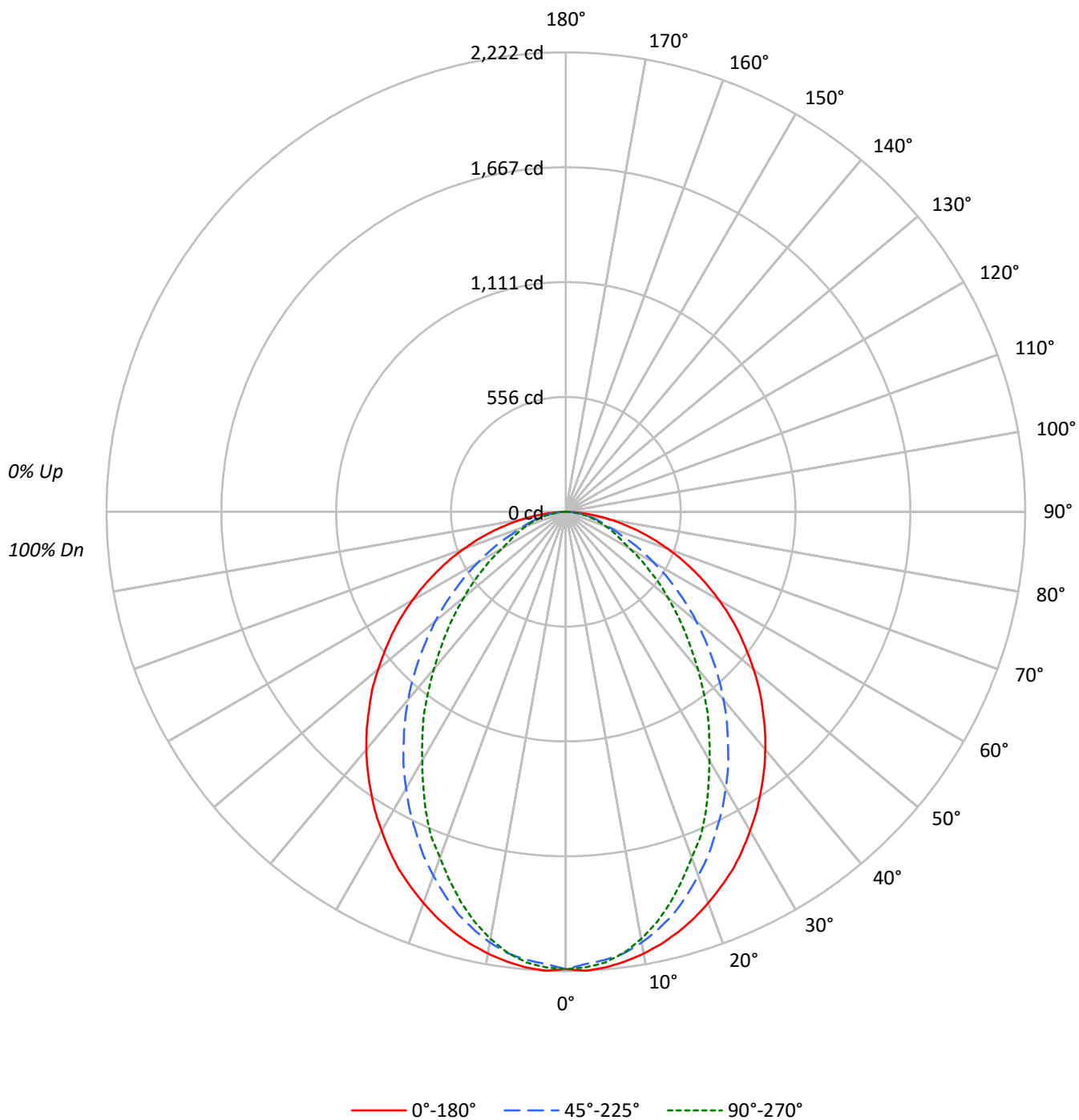
Lumens per Lamp: N/A
Luminaire Lumens: 4549.2 lumens
Efficiency: N/A
Efficacy: 77.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.21' x L: 2.21' x H: 0')
CIE Type: Direct

Input Watts (W): 58.7
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: P930864

CATALOG NUMBER: DFN2DS-SQ2F0-060DS940-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P930864

CATALOG NUMBER: DFN2DS-SQ2F0-060DS940-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°	4864	4864	4864
5°	4883	4803	4830
10°	4845	4725	4684
15°	4789	4584	4452
20°	4712	4384	4164
25°	4634	4157	3885
30°	4524	3924	3527
35°	4417	3670	3213
40°	4309	3407	2850
45°	4183	3113	2521
50°	4054	2815	2199
55°	3921	2494	1888
60°	3768	2157	1567
65°	3594	1812	1427
70°	3385	1492	1312
75°	3129	1360	1225
80°	2762	1216	1116
85°	2170	959	959

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4183 cd/sqm

TEST NUMBER: P930864

CATALOG NUMBER: DFN2DS-SQ2F0-060DS940-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	207.3	4.6
10°-20°	569.1	12.5
20°-30°	799.0	17.6
30°-40°	871.0	19.1
40°-50°	800.5	17.6
50°-60°	628.7	13.8
60°-70°	409.2	9.0
70°-80°	210.6	4.6
80°-90°	53.8	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°	1575.4	34.6
0°-40°	2446.4	53.8
0°-60°	3875.6	85.2
0°-90°	4549.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4549.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2212	2212	2212	2212	2212	
5°	2212	2202	2176	2194	2188	210
15°	2104	2082	2014	1976	1956	593
25°	1910	1846	1714	1632	1601	878
35°	1646	1543	1367	1241	1197	1030
45°	1345	1211	1001	859	811	1039
55°	1023	867	650	531	492	914
65°	691	528	348	280	274	685
75°	368	228	160	146	144	390
85°	86	44	38	38	38	103
90°	0	0	0	0	0	

TEST NUMBER: P930864

CATALOG NUMBER: DFN2DS-SQ2F0-060DS940-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2212.0	2212.0	2212.0	2212.0	2212.0
2.5°	2222.0	2212.0	2189.9	2210.0	2206.0
5°	2212.0	2202.0	2175.9	2194.0	2188.0
7.5°	2194.0	2182.0	2154.0	2161.9	2151.9
10°	2169.9	2155.9	2116.0	2109.8	2097.9
12.5°	2140.0	2121.9	2067.7	2055.9	2033.8
15°	2103.9	2081.7	2013.8	1975.8	1955.8
17.5°	2061.9	2029.7	1945.6	1901.7	1869.6
20°	2013.8	1973.6	1873.6	1823.7	1779.5
22.5°	1961.8	1915.7	1799.5	1731.6	1701.6
25°	1909.8	1845.6	1713.5	1631.6	1601.4
27.5°	1847.8	1779.5	1633.4	1539.3	1493.3
30°	1781.7	1705.4	1545.3	1443.3	1389.2
32.5°	1717.5	1625.4	1461.5	1341.2	1291.1
35°	1645.6	1543.4	1367.3	1241.1	1197.0
37.5°	1575.5	1465.2	1279.2	1141.0	1091.0
40°	1501.3	1381.4	1187.0	1044.9	992.9
42.5°	1425.3	1297.2	1095.0	946.8	896.9
45°	1345.2	1211.0	1001.0	858.6	810.6
47.5°	1269.2	1127.1	910.9	768.6	724.7
50°	1185.1	1043.0	822.8	684.5	642.7
52.5°	1102.9	952.7	738.7	606.6	568.6
55°	1022.9	866.8	650.5	530.6	492.5
57.5°	940.9	780.7	572.6	460.5	428.3
60°	856.8	696.7	490.4	388.5	356.4
62.5°	774.8	614.7	420.3	324.3	308.4
65°	690.7	528.4	348.3	280.4	274.2
67.5°	610.6	448.3	280.4	246.2	240.2
70°	526.5	370.4	232.1	212.2	204.1
72.5°	446.4	298.2	194.1	178.2	174.1
75°	368.3	228.1	160.1	146.1	144.2
77.5°	290.3	162.1	126.1	118.1	114.1
80°	218.1	116.1	96.0	88.1	88.1
82.5°	152.1	78.1	66.0	62.0	62.0
85°	86.0	44.0	38.0	38.0	38.0
87.5°	32.1	16.0	16.0	14.0	14.0
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930864

CATALOG NUMBER: DFN2DS-SQ2F0-060DS940-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	16.73	18.25	17.10	18.57	18.88	12.69	14.21	13.06	14.53	14.84
	3H	18.50	19.86	18.87	20.19	20.55	13.96	15.32	14.33	15.65	16.01
	4H	19.16	20.44	19.56	20.79	21.17	14.46	15.74	14.86	16.09	16.47
	6H	19.65	20.83	20.06	21.20	21.59	14.84	16.02	15.25	16.39	16.78
	8H	19.82	20.94	20.24	21.33	21.73	14.96	16.09	15.39	16.48	16.88
	12H	19.92	21.00	20.35	21.38	21.81	15.04	16.12	15.48	16.51	16.93
4H	2H	16.83	18.12	17.23	18.46	18.84	13.39	14.67	13.79	15.02	15.39
	3H	18.77	19.83	19.18	20.23	20.63	14.83	15.89	15.24	16.29	16.69
	4H	19.52	20.47	19.95	20.89	21.33	15.43	16.39	15.86	16.80	17.24
	6H	20.11	20.94	20.57	21.38	21.84	15.92	16.75	16.37	17.19	17.65
	8H	20.32	21.10	20.79	21.54	22.01	16.08	16.86	16.54	17.30	17.77
	12H	20.48	21.17	20.96	21.65	22.12	16.20	16.89	16.68	17.37	17.84
8H	4H	19.54	20.32	20.00	20.76	21.23	15.78	16.56	16.25	17.00	17.47
	6H	20.18	20.82	20.68	21.31	21.79	16.37	17.01	16.87	17.50	17.98
	8H	20.43	21.01	20.94	21.52	22.00	16.59	17.17	17.10	17.68	18.16
	12H	20.63	21.14	21.14	21.64	22.20	16.77	17.28	17.28	17.77	18.34
12H	4H	19.53	20.22	20.01	20.70	21.17	15.83	16.52	16.31	17.00	17.47
	6H	20.16	20.74	20.67	21.25	21.73	16.43	17.01	16.95	17.52	18.01
	8H	20.44	20.95	20.95	21.45	22.01	16.71	17.22	17.22	17.71	18.27