

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: P930820

Luminaire Tested: DFN2DS-SQ2F0-040DS850-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930820
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-SQ2F0-040DS850-RLL
Description: 2 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

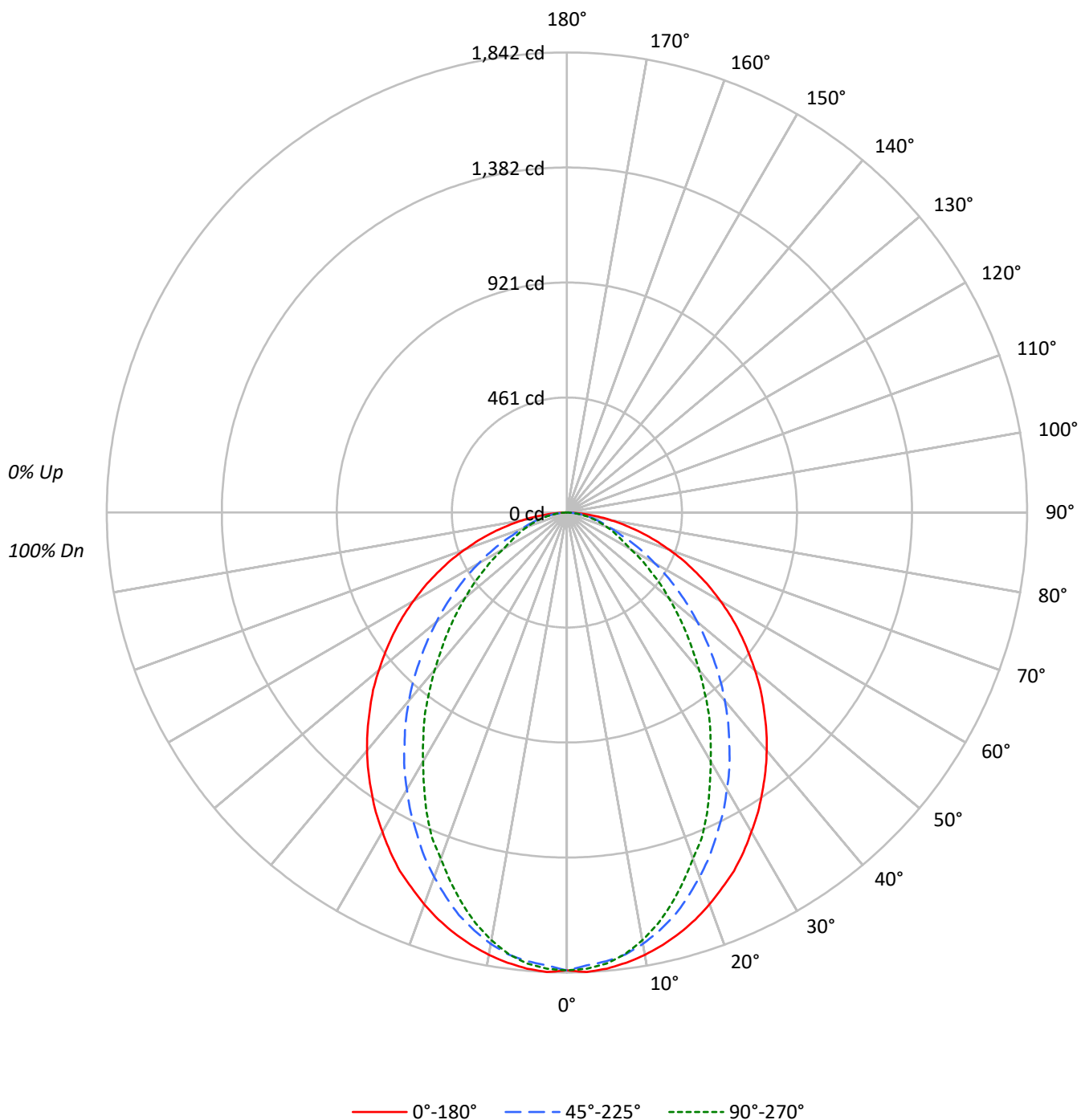
Lumens per Lamp: N/A
Luminaire Lumens: 3770.6 lumens
Efficiency: N/A
Efficacy: 100.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.21' x L: 2.21' x H: 0')
CIE Type: Direct

Input Watts (W): 37.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9952
Total Harmonic Distortion (THDi): 0.069
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930820

CATALOG NUMBER: DFN2DS-SQ2F0-040DS850-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P930820

CATALOG NUMBER: DFN2DS-SQ2F0-040DS850-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°	4031	4031	4031
5°	4047	3981	4003
10°	4016	3916	3883
15°	3970	3800	3690
20°	3906	3634	3452
25°	3840	3446	3220
30°	3749	3252	2924
35°	3661	3042	2663
40°	3572	2824	2362
45°	3467	2580	2089
50°	3360	2333	1822
55°	3250	2067	1565
60°	3123	1787	1299
65°	2979	1502	1182
70°	2806	1237	1087
75°	2593	1127	1016
80°	2289	1007	926
85°	1799	795	795

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3467 cd/sqm

TEST NUMBER: P930820

CATALOG NUMBER: DFN2DS-SQ2F0-040DS850-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.8	4.6
10°-20°	471.7	12.5
20°-30°	662.3	17.6
30°-40°	721.9	19.1
40°-50°	663.5	17.6
50°-60°	521.1	13.8
60°-70°	339.2	9.0
70°-80°	174.6	4.6
80°-90°	44.6	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°	1305.8	34.6
0°-40°	2027.7	53.8
0°-60°	3212.2	85.2
0°-90°	3770.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3770.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1833	1833	1833	1833	1833	
5°	1833	1825	1804	1818	1814	174
15°	1744	1726	1669	1638	1621	491
25°	1583	1530	1420	1352	1327	728
35°	1364	1279	1133	1029	992	854
45°	1115	1004	830	712	672	861
55°	848	718	539	440	408	758
65°	572	438	289	232	227	568
75°	305	189	133	121	120	323
85°	71	36	32	32	32	86
90°	0	0	0	0	0	

TEST NUMBER: P930820

CATALOG NUMBER: DFN2DS-SQ2F0-040DS850-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1833.4	1833.4	1833.4	1833.4	1833.4
2.5°	1841.7	1833.4	1815.1	1831.8	1828.4
5°	1833.4	1825.1	1803.5	1818.4	1813.5
7.5°	1818.4	1808.6	1785.4	1791.8	1783.6
10°	1798.6	1786.9	1753.8	1748.7	1738.9
12.5°	1773.7	1758.8	1713.8	1704.0	1685.7
15°	1743.8	1725.5	1669.2	1637.7	1621.1
17.5°	1709.0	1682.4	1612.6	1576.2	1549.6
20°	1669.2	1635.9	1552.9	1511.6	1475.0
22.5°	1626.0	1587.9	1491.5	1435.2	1410.4
25°	1582.9	1529.8	1420.2	1352.3	1327.3
27.5°	1531.5	1475.0	1353.9	1275.9	1237.6
30°	1476.7	1413.5	1280.8	1196.3	1151.5
32.5°	1423.6	1347.2	1211.2	1111.7	1070.1
35°	1364.0	1279.2	1133.3	1028.7	992.1
37.5°	1305.8	1214.5	1060.2	945.6	904.3
40°	1244.4	1144.9	983.9	866.1	823.0
42.5°	1181.3	1075.2	907.6	784.7	743.4
45°	1115.0	1003.8	829.6	711.8	671.9
47.5°	1052.0	934.2	755.0	637.1	600.6
50°	982.2	864.5	681.9	567.4	532.7
52.5°	914.1	789.7	612.3	502.7	471.2
55°	847.8	718.4	539.2	439.7	408.2
57.5°	779.8	647.1	474.5	381.6	355.1
60°	710.1	577.3	406.4	321.9	295.4
62.5°	642.2	509.5	348.3	268.8	255.6
65°	572.5	437.9	288.7	232.3	227.2
67.5°	506.1	371.6	232.3	204.1	199.1
70°	436.4	307.0	192.4	175.9	169.1
72.5°	370.1	247.2	160.9	147.7	144.4
75°	305.2	189.1	132.7	121.1	119.6
77.5°	240.7	134.3	104.6	97.9	94.5
80°	180.8	96.3	79.5	73.1	73.1
82.5°	126.1	64.8	54.8	51.3	51.3
85°	71.3	36.5	31.5	31.5	31.5
87.5°	26.6	13.2	13.2	11.6	11.6
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930820

CATALOG NUMBER: DFN2DS-SQ2F0-040DS850-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	16.08	17.60	16.44	17.91	18.23	12.04	13.56	12.40	13.87	14.19
	3H	17.84	19.21	18.22	19.54	19.90	13.30	14.67	13.68	15.00	15.36
	4H	18.51	19.79	18.91	20.14	20.52	13.81	15.09	14.21	15.44	15.81
	6H	19.00	20.18	19.41	20.55	20.94	14.19	15.37	14.60	15.74	16.13
	8H	19.16	20.29	19.59	20.68	21.08	14.31	15.44	14.74	15.83	16.23
	12H	19.27	20.35	19.70	20.73	21.16	14.39	15.47	14.82	15.85	16.28
4H	2H	16.18	17.46	16.58	17.81	18.19	12.73	14.01	13.13	14.36	14.74
	3H	18.12	19.18	18.53	19.58	19.98	14.18	15.24	14.59	15.64	16.04
	4H	18.87	19.82	19.30	20.24	20.68	14.78	15.73	15.21	16.15	16.59
	6H	19.46	20.29	19.91	20.73	21.19	15.27	16.10	15.72	16.54	17.00
	8H	19.67	20.45	20.14	20.89	21.36	15.43	16.20	15.89	16.65	17.12
	12H	19.83	20.52	20.31	21.00	21.47	15.54	16.24	16.03	16.72	17.19
8H	4H	18.89	19.67	19.35	20.11	20.58	15.13	15.91	15.59	16.35	16.82
	6H	19.53	20.17	20.02	20.66	21.14	15.72	16.36	16.21	16.85	17.33
	8H	19.78	20.35	20.29	20.86	21.35	15.94	16.51	16.45	17.02	17.51
	12H	19.98	20.49	20.49	20.98	21.55	16.12	16.63	16.63	17.12	17.68
12H	4H	18.87	19.57	19.36	20.05	20.52	15.17	15.87	15.66	16.35	16.82
	6H	19.51	20.09	20.02	20.60	21.08	15.78	16.36	16.29	16.87	17.36
	8H	19.79	20.30	20.30	20.79	21.36	16.05	16.56	16.56	17.06	17.62