

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: P930982

Luminaire Tested: DFN2DS-SQ3F0-080DS850-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930982
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-SQ3F0-080DS850-RLL
Description: 3 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

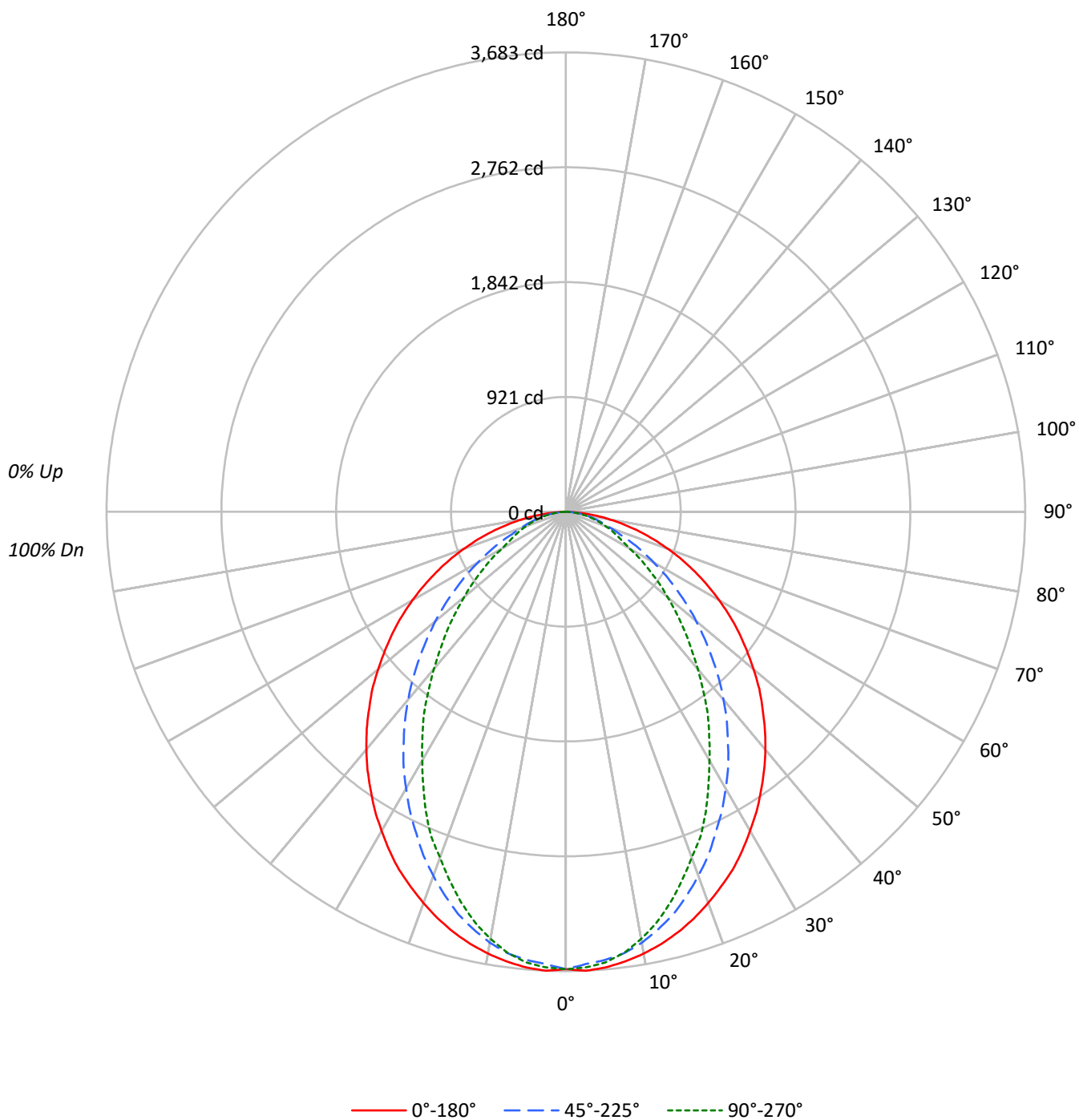
Lumens per Lamp: N/A
Luminaire Lumens: 7541.2 lumens
Efficiency: N/A
Efficacy: 92.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 82
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: P930982

CATALOG NUMBER: DFN2DS-SQ3F0-080DS850-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P930982

CATALOG NUMBER: DFN2DS-SQ3F0-080DS850-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°	4201	4201	4201
5°	4217	4149	4172
10°	4185	4081	4046
15°	4137	3960	3846
20°	4071	3787	3597
25°	4002	3591	3356
30°	3908	3389	3047
35°	3816	3170	2775
40°	3723	2943	2462
45°	3614	2689	2178
50°	3502	2431	1899
55°	3387	2154	1631
60°	3255	1863	1354
65°	3104	1565	1232
70°	2924	1289	1134
75°	2703	1175	1059
80°	2385	1050	964
85°	1875	828	828

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3614 cd/sqm

TEST NUMBER: P930982

CATALOG NUMBER: DFN2DS-SQ3F0-080DS850-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	343.7	4.6
10°-20°	943.4	12.5
20°-30°	1324.5	17.6
30°-40°	1443.8	19.1
40°-50°	1327.0	17.6
50°-60°	1042.1	13.8
60°-70°	678.3	9.0
70°-80°	349.2	4.6
80°-90°	89.1	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°	2611.6	34.6
0°-40°	4055.4	53.8
0°-60°	6424.5	85.2
0°-90°	7541.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7541.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3667	3667	3667	3667	3667	
5°	3667	3650	3607	3637	3627	348
15°	3488	3451	3338	3275	3242	983
25°	3166	3060	2840	2705	2655	1456
35°	2728	2558	2267	2058	1984	1707
45°	2230	2008	1659	1423	1344	1722
55°	1696	1437	1078	879	816	1515
65°	1145	876	577	465	454	1135
75°	610	378	266	242	239	646
85°	143	73	63	63	63	171
90°	0	0	0	0	0	

TEST NUMBER: P930982

CATALOG NUMBER: DFN2DS-SQ3F0-080DS850-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3666.8	3666.8	3666.8	3666.8	3666.8
2.5°	3683.3	3666.8	3630.2	3663.6	3656.9
5°	3666.8	3650.3	3606.9	3636.9	3627.0
7.5°	3636.9	3617.1	3570.6	3583.7	3567.1
10°	3597.0	3573.9	3507.7	3497.5	3477.7
12.5°	3547.5	3517.5	3427.7	3408.0	3371.4
15°	3487.6	3451.0	3338.3	3275.3	3242.2
17.5°	3417.8	3364.7	3225.3	3152.4	3099.2
20°	3338.3	3271.8	3106.0	3023.2	2949.9
22.5°	3252.0	3175.6	2983.1	2870.4	2820.7
25°	3165.8	3059.5	2840.5	2704.6	2654.6
27.5°	3062.9	2949.9	2707.7	2551.8	2475.4
30°	2953.5	2827.1	2561.7	2392.7	2302.8
32.5°	2847.1	2694.4	2422.6	2223.3	2140.3
35°	2727.8	2558.5	2266.6	2057.5	1984.2
37.5°	2611.6	2428.9	2120.5	1891.3	1808.6
40°	2488.8	2289.9	1967.7	1732.1	1645.9
42.5°	2362.7	2150.5	1815.2	1569.6	1486.7
45°	2230.0	2007.5	1659.3	1423.4	1343.9
47.5°	2104.0	1868.4	1510.0	1274.1	1201.3
50°	1964.5	1729.0	1364.0	1134.7	1065.3
52.5°	1828.3	1579.3	1224.4	1005.5	942.5
55°	1695.6	1436.8	1078.4	879.4	816.4
57.5°	1559.7	1294.2	949.2	763.3	710.1
60°	1420.2	1154.8	812.9	643.9	590.8
62.5°	1284.3	1018.8	696.8	537.6	511.2
65°	1144.9	875.9	577.3	464.8	454.5
67.5°	1012.2	743.3	464.8	408.0	398.2
70°	872.8	614.1	384.8	351.7	338.4
72.5°	740.0	494.3	321.8	295.4	288.7
75°	610.5	378.2	265.5	242.2	239.1
77.5°	481.3	268.6	209.2	195.7	189.1
80°	361.5	192.6	159.1	146.1	146.1
82.5°	252.1	129.5	109.5	102.8	102.8
85°	142.6	72.9	63.0	63.0	63.0
87.5°	53.1	26.4	26.4	23.3	23.3
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930982

CATALOG NUMBER: DFN2DS-SQ3F0-080DS850-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	16.22	17.74	16.59	18.06	18.37	12.18	13.70	12.55	14.02	14.33
	3H	17.99	19.35	18.37	19.68	20.04	13.45	14.81	13.83	15.14	15.50
	4H	18.65	19.93	19.05	20.28	20.66	13.95	15.23	14.35	15.58	15.96
	6H	19.14	20.33	19.55	20.69	21.08	14.33	15.51	14.74	15.88	16.27
	8H	19.31	20.43	19.73	20.82	21.22	14.45	15.58	14.88	15.97	16.37
	12H	19.41	20.49	19.84	20.87	21.30	14.54	15.61	14.97	16.00	16.43
4H	2H	16.33	17.61	16.73	17.96	18.33	12.88	14.16	13.28	14.51	14.89
	3H	18.26	19.32	18.67	19.72	20.12	14.32	15.38	14.73	15.78	16.18
	4H	19.01	19.97	19.44	20.38	20.82	14.92	15.88	15.35	16.29	16.73
	6H	19.60	20.43	20.06	20.88	21.33	15.41	16.24	15.87	16.68	17.14
	8H	19.81	20.59	20.28	21.04	21.50	15.57	16.35	16.03	16.79	17.26
	12H	19.97	20.66	20.45	21.14	21.61	15.69	16.38	16.17	16.86	17.33
8H	4H	19.03	19.81	19.50	20.25	20.72	15.27	16.05	15.74	16.50	16.96
	6H	19.67	20.31	20.17	20.80	21.28	15.86	16.50	16.36	16.99	17.47
	8H	19.92	20.50	20.43	21.01	21.50	16.08	16.66	16.60	17.17	17.66
	12H	20.12	20.63	20.63	21.13	21.69	16.26	16.77	16.77	17.26	17.83
12H	4H	19.02	19.71	19.50	20.19	20.66	15.32	16.01	15.80	16.49	16.96
	6H	19.65	20.23	20.16	20.74	21.23	15.92	16.50	16.44	17.01	17.50
	8H	19.94	20.45	20.45	20.94	21.50	16.20	16.71	16.71	17.20	17.76