

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: P930904

Luminaire Tested: DFN2DS-SQ3F0-040DS830-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930904
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-SQ3F0-040DS830-RLL
Description: 3 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

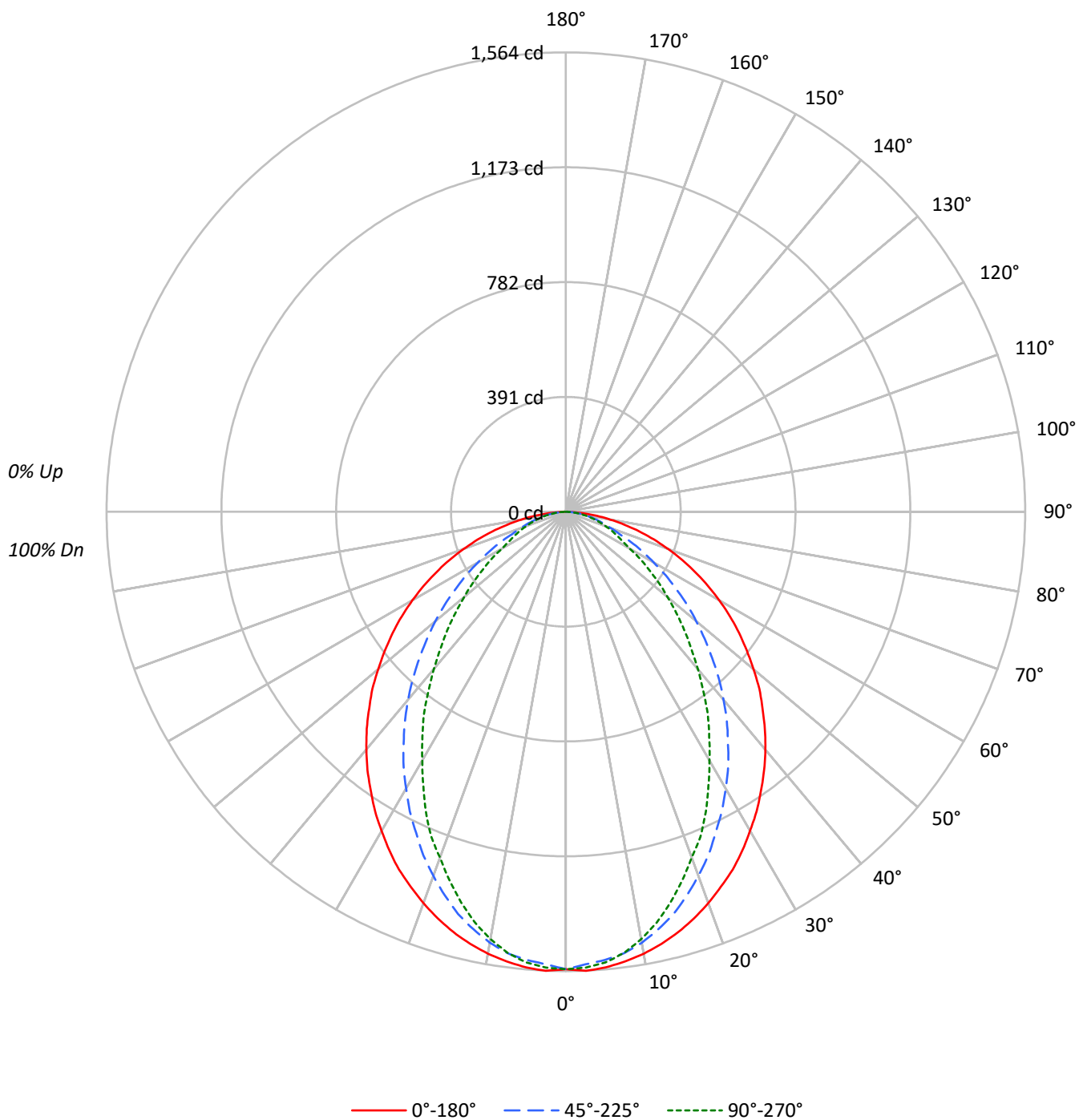
Lumens per Lamp: N/A
Luminaire Lumens: 3202.8 lumens
Efficiency: N/A
Efficacy: 84.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 38.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9933
Total Harmonic Distortion (THDi): 0.066
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930904

CATALOG NUMBER: DFN2DS-SQ3F0-040DS830-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P930904

CATALOG NUMBER: DFN2DS-SQ3F0-040DS830-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°	1784	1784	1784
5°	1791	1762	1772
10°	1777	1733	1719
15°	1757	1682	1633
20°	1729	1608	1528
25°	1700	1525	1425
30°	1660	1439	1294
35°	1621	1346	1179
40°	1581	1250	1046
45°	1535	1142	925
50°	1487	1032	806
55°	1439	915	693
60°	1382	791	575
65°	1318	665	523
70°	1242	547	481
75°	1147	499	449
80°	1013	445	410
85°	797	352	352

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1535 cd/sqm

TEST NUMBER: P930904

CATALOG NUMBER: DFN2DS-SQ3F0-040DS830-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.0	4.6
10°-20°	400.7	12.5
20°-30°	562.5	17.6
30°-40°	613.2	19.1
40°-50°	563.6	17.6
50°-60°	442.6	13.8
60°-70°	288.1	9.0
70°-80°	148.3	4.6
80°-90°	37.9	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°	1109.1	34.6
0°-40°	1722.3	53.8
0°-60°	2728.5	85.2
0°-90°	3202.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3202.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1557	1557	1557	1557	1557	
5°	1557	1550	1532	1545	1540	148
15°	1481	1466	1418	1391	1377	417
25°	1344	1299	1206	1149	1127	618
35°	1159	1087	963	874	843	725
45°	947	853	705	605	571	731
55°	720	610	458	374	347	644
65°	486	372	245	197	193	482
75°	259	161	113	103	102	274
85°	61	31	27	27	27	73
90°	0	0	0	0	0	

TEST NUMBER: P930904

CATALOG NUMBER: DFN2DS-SQ3F0-040DS830-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1557.3	1557.3	1557.3	1557.3	1557.3
2.5°	1564.4	1557.3	1541.8	1556.0	1553.1
5°	1557.3	1550.2	1531.9	1544.6	1540.5
7.5°	1544.6	1536.2	1516.5	1522.0	1515.0
10°	1527.7	1517.8	1489.7	1485.3	1477.1
12.5°	1506.6	1493.9	1455.8	1447.4	1431.8
15°	1481.2	1465.7	1417.8	1391.1	1377.0
17.5°	1451.6	1429.0	1369.8	1338.9	1316.3
20°	1417.8	1389.5	1319.1	1283.9	1252.9
22.5°	1381.2	1348.8	1266.9	1219.0	1198.0
25°	1344.5	1299.4	1206.3	1148.7	1127.4
27.5°	1300.9	1252.9	1150.0	1083.8	1051.3
30°	1254.4	1200.7	1087.9	1016.1	978.1
32.5°	1209.2	1144.3	1028.9	944.3	908.9
35°	1158.6	1086.6	962.6	873.8	842.7
37.5°	1109.2	1031.6	900.6	803.2	768.1
40°	1057.0	972.5	835.7	735.7	699.1
42.5°	1003.4	913.3	770.9	666.6	631.4
45°	947.1	852.6	704.7	604.6	570.8
47.5°	893.6	793.5	641.3	541.2	510.2
50°	834.3	734.3	579.2	481.9	452.4
52.5°	776.5	670.8	520.1	427.0	400.3
55°	720.2	610.2	458.0	373.5	346.8
57.5°	662.4	549.7	403.1	324.1	301.6
60°	603.2	490.4	345.2	273.5	250.9
62.5°	545.5	432.8	295.9	228.3	217.1
65°	486.3	372.0	245.2	197.3	193.0
67.5°	429.9	315.7	197.3	173.3	169.1
70°	370.7	260.7	163.4	149.4	143.7
72.5°	314.3	210.0	136.7	125.5	122.6
75°	259.2	160.6	112.8	102.9	101.5
77.5°	204.4	114.1	88.8	83.2	80.3
80°	153.5	81.8	67.5	62.1	62.1
82.5°	107.1	55.0	46.5	43.6	43.6
85°	60.6	31.0	26.8	26.8	26.8
87.5°	22.6	11.2	11.2	9.9	9.9
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930904

CATALOG NUMBER: DFN2DS-SQ3F0-040DS830-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	13.25	14.77	13.61	15.08	15.40	9.21	10.73	9.57	11.04	11.36
	3H	15.01	16.38	15.39	16.71	17.07	10.47	11.84	10.85	12.16	12.53
	4H	15.68	16.96	16.08	17.31	17.69	10.97	12.25	11.37	12.60	12.98
	6H	16.17	17.35	16.58	17.72	18.11	11.35	12.54	11.77	12.90	13.30
	8H	16.33	17.46	16.76	17.85	18.25	11.48	12.61	11.91	13.00	13.40
	12H	16.44	17.51	16.87	17.90	18.33	11.56	12.64	11.99	13.02	13.45
4H	2H	13.35	14.63	13.75	14.98	15.36	9.90	11.18	10.30	11.53	11.91
	3H	15.28	16.35	15.69	16.75	17.15	11.35	12.41	11.76	12.81	13.21
	4H	16.03	16.99	16.47	17.41	17.84	11.94	12.90	12.38	13.32	13.76
	6H	16.63	17.46	17.08	17.90	18.36	12.43	13.27	12.89	13.71	14.17
	8H	16.84	17.62	17.30	18.06	18.53	12.60	13.37	13.06	13.82	14.28
	12H	16.99	17.69	17.48	18.17	18.64	12.71	13.41	13.19	13.89	14.36
8H	4H	16.06	16.83	16.52	17.28	17.75	12.30	13.08	12.76	13.52	13.99
	6H	16.70	17.34	17.19	17.83	18.31	12.89	13.53	13.38	14.02	14.50
	8H	16.95	17.52	17.46	18.03	18.52	13.11	13.68	13.62	14.19	14.68
	12H	17.15	17.66	17.66	18.15	18.72	13.29	13.80	13.80	14.29	14.85
12H	4H	16.04	16.74	16.52	17.21	17.69	12.34	13.04	12.82	13.51	13.99
	6H	16.68	17.25	17.19	17.76	18.25	12.95	13.53	13.46	14.04	14.52
	8H	16.96	17.47	17.47	17.96	18.53	13.22	13.73	13.73	14.22	14.79