

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: P930907

Luminaire Tested: DFN2DS-SQ3F0-040DS840-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930907
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-SQ3F0-040DS840-FLL
Description: 3 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

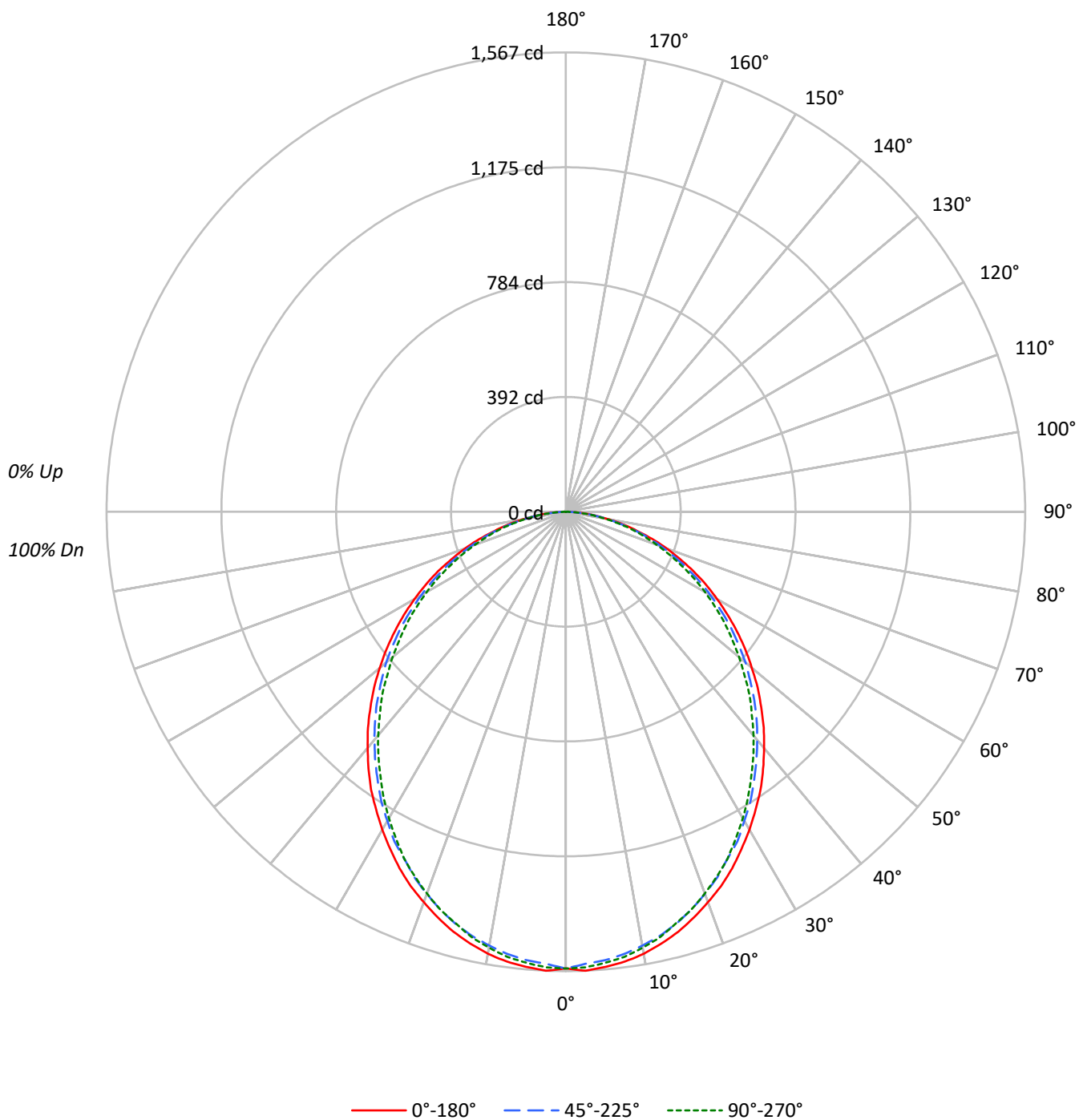
Lumens per Lamp: N/A
Luminaire Lumens: 3963.9 lumens
Efficiency: N/A
Efficacy: 104.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

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: P930907

CATALOG NUMBER: DFN2DS-SQ3F0-040DS840-FLL

Luminous Intensity Polar Plot



TEST NUMBER: P930907

CATALOG NUMBER: DFN2DS-SQ3F0-040DS840-FLL

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	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1785	1785	1785
5°	1792	1766	1777
10°	1781	1748	1757
15°	1759	1726	1724
20°	1728	1692	1690
25°	1697	1650	1650
30°	1657	1611	1598
35°	1620	1565	1542
40°	1573	1519	1490
45°	1527	1473	1437
50°	1477	1426	1375
55°	1425	1371	1320
60°	1366	1305	1256
65°	1304	1239	1182
70°	1225	1159	1104
75°	1114	1067	1041
80°	988	958	909
85°	807	769	690

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1527 cd/sqm

TEST NUMBER: P930907

CATALOG NUMBER: DFN2DS-SQ3F0-040DS840-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.6	3.7
10°-20°	412.6	10.4
20°-30°	606.3	15.3
30°-40°	704.2	17.8
40°-50°	703.3	17.7
50°-60°	613.3	15.5
60°-70°	453.4	11.4
70°-80°	256.5	6.5
80°-90°	67.7	1.7
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°	1165.5	29.4
0°-40°	1869.8	47.2
0°-60°	3186.4	80.4
0°-90°	3963.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3963.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1558	1558	1558	1558	1558	
5°	1558	1552	1536	1547	1545	148
15°	1483	1474	1455	1461	1453	418
25°	1342	1330	1305	1308	1305	618
35°	1158	1143	1119	1110	1103	723
45°	942	932	909	893	887	727
55°	713	704	686	668	661	638
65°	481	472	457	443	436	476
75°	252	249	241	232	235	269
85°	61	60	58	54	52	72
90°	0	0	0	0	0	

TEST NUMBER: P930907

CATALOG NUMBER: DFN2DS-SQ3F0-040DS840-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1558.0	1558.0	1558.0	1558.0	1558.0
2.5°	1567.1	1559.6	1543.0	1558.0	1555.2
5°	1558.0	1552.1	1535.5	1547.4	1544.6
7.5°	1547.4	1538.5	1522.0	1534.1	1531.1
10°	1531.1	1520.6	1502.7	1514.6	1510.1
12.5°	1508.5	1499.6	1481.7	1489.2	1486.1
15°	1483.1	1474.2	1454.7	1460.7	1453.3
17.5°	1451.7	1442.7	1423.2	1430.6	1423.2
20°	1417.1	1408.2	1387.3	1391.7	1385.9
22.5°	1382.8	1369.3	1349.7	1349.7	1346.7
25°	1342.2	1330.3	1304.9	1307.8	1304.9
27.5°	1297.3	1286.8	1267.5	1263.0	1255.6
30°	1252.5	1240.4	1218.0	1213.5	1207.5
32.5°	1204.5	1195.6	1171.6	1162.6	1156.5
35°	1158.1	1143.1	1119.1	1110.1	1102.6
37.5°	1105.6	1092.1	1068.1	1057.7	1050.1
40°	1051.8	1039.6	1015.6	1002.3	996.3
42.5°	999.3	987.2	963.4	948.2	939.3
45°	942.3	931.9	909.3	893.0	886.9
47.5°	886.9	876.4	852.5	835.9	827.0
50°	828.4	820.9	800.0	779.0	771.5
52.5°	771.5	761.1	741.6	725.1	714.6
55°	713.2	704.1	686.2	668.2	660.8
57.5°	654.7	647.2	627.6	609.7	603.7
60°	596.2	590.3	569.4	552.9	548.3
62.5°	539.3	528.8	513.9	498.9	492.9
65°	481.0	471.9	457.0	443.4	436.0
67.5°	421.0	413.4	400.1	389.6	383.6
70°	365.6	359.6	346.0	335.5	329.6
72.5°	308.7	302.6	295.2	284.7	280.2
75°	251.7	248.7	241.1	232.2	235.2
77.5°	200.7	194.7	191.7	187.2	182.8
80°	149.8	148.2	145.2	140.8	137.8
82.5°	101.9	101.9	100.5	94.4	94.4
85°	61.4	60.0	58.5	53.9	52.5
87.5°	27.0	24.0	21.0	16.5	14.9
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930907

CATALOG NUMBER: DFN2DS-SQ3F0-040DS840-FLL

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	13.30	14.91	13.66	15.22	15.53	12.85	14.46	13.22	14.78	15.09
	3H	15.05	16.50	15.42	16.83	17.19	14.55	16.01	14.93	16.34	16.70
	4H	15.69	17.06	16.09	17.41	17.79	15.20	16.57	15.60	16.91	17.29
	6H	16.16	17.43	16.57	17.79	18.19	15.66	16.93	16.07	17.29	17.68
	8H	16.30	17.52	16.73	17.90	18.30	15.80	17.01	16.23	17.40	17.80
	12H	16.39	17.55	16.82	17.94	18.37	15.88	17.04	16.31	17.42	17.85
4H	2H	13.86	15.23	14.25	15.57	15.95	13.50	14.87	13.90	15.22	15.60
	3H	15.83	16.98	16.24	17.38	17.78	15.42	16.57	15.83	16.97	17.37
	4H	16.61	17.64	17.04	18.06	18.49	16.18	17.22	16.62	17.63	18.07
	6H	17.20	18.11	17.66	18.55	19.01	16.77	17.68	17.23	18.12	18.57
	8H	17.39	18.24	17.85	18.68	19.15	16.96	17.80	17.42	18.24	18.71
	12H	17.53	18.29	18.01	18.76	19.23	17.07	17.83	17.55	18.31	18.78
8H	4H	16.88	17.73	17.34	18.17	18.64	16.51	17.35	16.97	17.80	18.26
	6H	17.60	18.30	18.09	18.79	19.26	17.21	17.92	17.71	18.41	18.88
	8H	17.85	18.49	18.36	18.99	19.48	17.46	18.09	17.97	18.60	19.09
	12H	18.05	18.61	18.56	19.10	19.66	17.64	18.20	18.15	18.69	19.25
12H	4H	16.91	17.67	17.39	18.14	18.61	16.54	17.30	17.02	17.78	18.25
	6H	17.64	18.27	18.15	18.78	19.27	17.27	17.90	17.78	18.41	18.90
	8H	17.95	18.51	18.46	19.00	19.56	17.58	18.13	18.08	18.63	19.19