

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: P930919

Luminaire Tested: DFN2DS-SQ3F0-040DS950-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930919
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-SQ3F0-040DS950-FLL
Description: 3 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

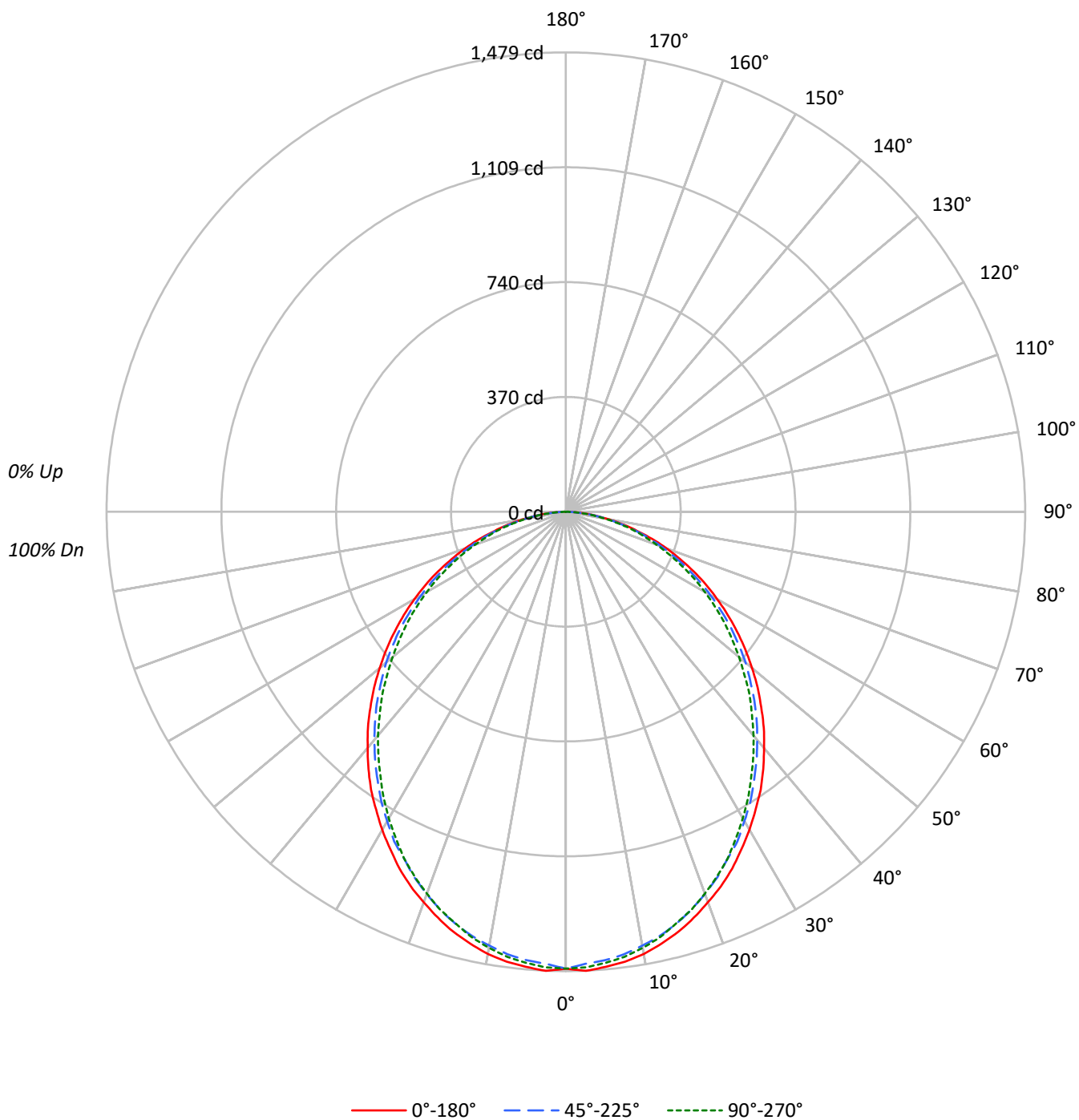
Lumens per Lamp: N/A
Luminaire Lumens: 3742.2 lumens
Efficiency: N/A
Efficacy: 98.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

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

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Luminous Intensity Polar Plot



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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°	1685	1685	1685
5°	1692	1667	1677
10°	1682	1651	1659
15°	1661	1629	1627
20°	1631	1597	1595
25°	1602	1557	1557
30°	1564	1521	1508
35°	1529	1478	1456
40°	1485	1434	1407
45°	1442	1391	1357
50°	1394	1346	1298
55°	1345	1294	1246
60°	1290	1232	1186
65°	1231	1170	1116
70°	1156	1094	1043
75°	1052	1008	983
80°	934	905	858
85°	761	726	651

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1442 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.4	3.7
10°-20°	389.5	10.4
20°-30°	572.4	15.3
30°-40°	664.8	17.8
40°-50°	664.0	17.7
50°-60°	579.0	15.5
60°-70°	428.0	11.4
70°-80°	242.2	6.5
80°-90°	63.9	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°	1100.3	29.4
0°-40°	1765.2	47.2
0°-60°	3008.1	80.4
0°-90°	3742.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3742.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1471	1471	1471	1471	1471	
5°	1471	1465	1450	1461	1458	140
15°	1400	1392	1373	1379	1372	394
25°	1267	1256	1232	1235	1232	583
35°	1093	1079	1056	1048	1041	683
45°	890	880	858	843	837	687
55°	673	665	648	631	624	602
65°	454	446	431	419	412	449
75°	238	235	228	219	222	254
85°	58	57	55	51	50	68
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1470.8	1470.8	1470.8	1470.8	1470.8
2.5°	1479.4	1472.3	1456.7	1470.8	1468.2
5°	1470.8	1465.2	1449.6	1460.9	1458.2
7.5°	1460.9	1452.5	1436.9	1448.3	1445.5
10°	1445.5	1435.5	1418.6	1429.9	1425.6
12.5°	1424.1	1415.7	1398.8	1405.9	1402.9
15°	1400.1	1391.7	1373.3	1378.9	1372.0
17.5°	1370.4	1362.0	1343.6	1350.6	1343.6
20°	1337.8	1329.4	1309.7	1313.8	1308.4
22.5°	1305.4	1292.7	1274.2	1274.2	1271.4
25°	1267.2	1255.9	1231.9	1234.6	1231.9
27.5°	1224.7	1214.8	1196.6	1192.3	1185.3
30°	1182.4	1171.0	1149.9	1145.6	1140.0
32.5°	1137.1	1128.7	1106.0	1097.5	1091.8
35°	1093.3	1079.2	1056.5	1048.0	1040.9
37.5°	1043.8	1031.0	1008.3	998.5	991.4
40°	992.9	981.5	958.8	946.2	940.6
42.5°	943.4	932.0	909.5	895.2	886.8
45°	889.6	879.8	858.4	843.0	837.3
47.5°	837.3	827.3	804.8	789.2	780.8
50°	782.1	775.0	755.2	735.4	728.3
52.5°	728.3	718.5	700.2	684.6	674.6
55°	673.3	664.7	647.8	630.8	623.8
57.5°	618.0	611.0	592.5	575.6	569.9
60°	562.8	557.3	537.5	521.9	517.7
62.5°	509.2	499.2	485.2	471.0	465.3
65°	454.1	445.5	431.4	418.6	411.6
67.5°	397.5	390.3	377.7	367.8	362.1
70°	345.1	339.4	326.7	316.8	311.2
72.5°	291.4	285.7	278.7	268.8	264.5
75°	237.6	234.8	227.7	219.2	222.1
77.5°	189.5	183.8	181.0	176.7	172.6
80°	141.5	140.0	137.1	133.0	130.1
82.5°	96.2	96.2	94.9	89.1	89.1
85°	57.9	56.6	55.2	50.8	49.5
87.5°	25.5	22.7	19.8	15.6	14.1
90°	0.0	0.0	0.0	0.0	0.0

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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	13.10	14.71	13.46	15.02	15.33	12.65	14.26	13.02	14.58	14.89
	3H	14.85	16.30	15.22	16.63	16.99	14.36	15.81	14.73	16.14	16.50
	4H	15.49	16.86	15.89	17.21	17.59	15.00	16.37	15.40	16.71	17.09
	6H	15.96	17.23	16.37	17.59	17.99	15.46	16.73	15.87	17.09	17.48
	8H	16.10	17.32	16.53	17.70	18.10	15.60	16.81	16.03	17.20	17.60
	12H	16.19	17.35	16.62	17.74	18.17	15.68	16.84	16.11	17.22	17.65
4H	2H	13.66	15.03	14.05	15.37	15.75	13.30	14.67	13.70	15.02	15.40
	3H	15.63	16.78	16.04	17.18	17.58	15.22	16.37	15.63	16.77	17.17
	4H	16.41	17.44	16.84	17.86	18.29	15.98	17.02	16.42	17.43	17.87
	6H	17.00	17.91	17.46	18.35	18.81	16.57	17.48	17.03	17.92	18.37
	8H	17.19	18.04	17.65	18.48	18.95	16.76	17.60	17.22	18.04	18.51
	12H	17.33	18.09	17.81	18.56	19.03	16.87	17.63	17.35	18.11	18.58
8H	4H	16.68	17.53	17.14	17.97	18.44	16.31	17.15	16.77	17.60	18.06
	6H	17.40	18.10	17.89	18.59	19.06	17.01	17.72	17.51	18.21	18.68
	8H	17.65	18.29	18.16	18.79	19.28	17.26	17.89	17.77	18.40	18.89
	12H	17.85	18.41	18.36	18.90	19.46	17.44	18.00	17.95	18.49	19.05
12H	4H	16.71	17.47	17.19	17.94	18.41	16.34	17.10	16.82	17.58	18.05
	6H	17.44	18.07	17.95	18.58	19.07	17.07	17.70	17.58	18.21	18.70
	8H	17.75	18.31	18.26	18.80	19.36	17.38	17.93	17.88	18.43	18.99