

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: P930272

Luminaire Tested: DFN2DS-HX4F0-040DS950-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930272
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-HX4F0-040DS950-RLL
Description: 4 foot, Hexagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

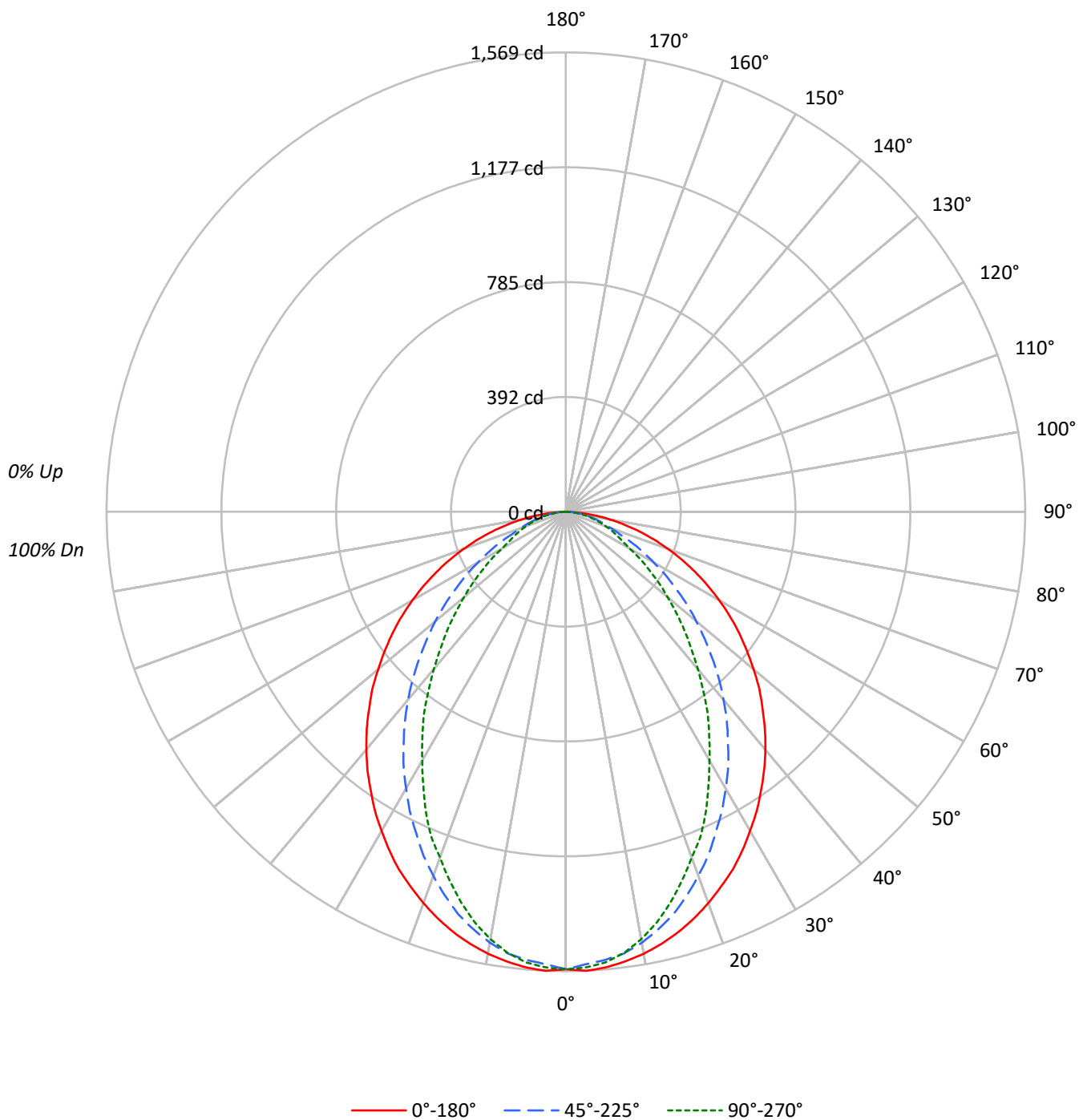
Lumens per Lamp: N/A
Luminaire Lumens: 3213.0 lumens
Efficiency: N/A
Efficacy: 84.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 4.09' x L: 3.54' x H: 0')
CIE Type: Direct

Input Watts (W): 38.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9977
Total Harmonic Distortion (THDi): 0.049
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930272

CATALOG NUMBER: DFN2DS-HX4F0-040DS950-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P930272

CATALOG NUMBER: DFN2DS-HX4F0-040DS950-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°	1162	1162	1162
5°	1166	1147	1153
10°	1157	1128	1119
15°	1144	1095	1063
20°	1125	1047	994
25°	1107	993	928
30°	1080	937	842
35°	1055	877	767
40°	1029	814	681
45°	999	743	602
50°	968	672	525
55°	937	596	451
60°	900	515	374
65°	858	433	341
70°	809	357	313
75°	747	325	293
80°	659	290	267
85°	519	229	229

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 999 cd/sqm

TEST NUMBER: P930272

CATALOG NUMBER: DFN2DS-HX4F0-040DS950-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.4	4.6
10°-20°	401.9	12.5
20°-30°	564.3	17.6
30°-40°	615.1	19.1
40°-50°	565.4	17.6
50°-60°	444.0	13.8
60°-70°	289.0	9.0
70°-80°	148.8	4.6
80°-90°	38.0	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°	1112.7	34.6
0°-40°	1727.8	53.8
0°-60°	2737.2	85.2
0°-90°	3213.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3213.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1562	1562	1562	1562	1562	
5°	1562	1555	1537	1550	1545	148
15°	1486	1470	1422	1396	1381	419
25°	1349	1304	1210	1152	1131	620
35°	1162	1090	966	877	845	727
45°	950	855	707	606	573	734
55°	722	612	460	375	348	646
65°	488	373	246	198	194	484
75°	260	161	113	103	102	275
85°	61	31	27	27	27	73
90°	0	0	0	0	0	

TEST NUMBER: P930272

CATALOG NUMBER: DFN2DS-HX4F0-040DS950-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1562.3	1562.3	1562.3	1562.3	1562.3
2.5°	1569.4	1562.3	1546.7	1561.0	1558.0
5°	1562.3	1555.2	1536.8	1549.5	1545.4
7.5°	1549.5	1541.1	1521.4	1526.8	1519.8
10°	1532.6	1522.7	1494.4	1490.1	1481.8
12.5°	1511.4	1498.7	1460.4	1452.0	1436.4
15°	1485.9	1470.3	1422.3	1395.5	1381.4
17.5°	1456.2	1433.6	1374.1	1343.1	1320.4
20°	1422.3	1394.0	1323.3	1288.0	1256.8
22.5°	1385.6	1353.1	1270.9	1222.9	1201.9
25°	1348.8	1303.5	1210.2	1152.3	1131.0
27.5°	1305.0	1256.8	1153.7	1087.2	1054.6
30°	1258.4	1204.5	1091.4	1019.4	981.2
32.5°	1213.1	1148.0	1032.1	947.3	911.8
35°	1162.3	1090.1	965.7	876.6	845.4
37.5°	1112.7	1034.9	903.4	805.8	770.6
40°	1060.4	975.6	838.4	738.0	701.3
42.5°	1006.6	916.2	773.4	668.7	633.4
45°	950.1	855.3	707.0	606.5	572.6
47.5°	896.4	796.1	643.4	542.9	511.8
50°	837.0	736.6	581.1	483.5	453.9
52.5°	779.0	672.9	521.7	428.4	401.5
55°	722.5	612.2	459.5	374.7	347.9
57.5°	664.5	551.4	404.4	325.2	302.6
60°	605.1	492.0	346.3	274.3	251.7
62.5°	547.2	434.1	296.8	229.1	217.8
65°	487.8	373.2	246.0	198.0	193.6
67.5°	431.3	316.7	198.0	173.9	169.6
70°	371.9	261.6	164.0	149.9	144.1
72.5°	315.3	210.6	137.1	125.9	123.0
75°	260.1	161.1	113.1	103.2	101.9
77.5°	205.1	114.4	89.1	83.4	80.5
80°	154.0	82.0	67.8	62.3	62.3
82.5°	107.4	55.2	46.7	43.8	43.8
85°	60.8	31.1	26.8	26.8	26.8
87.5°	22.7	11.2	11.2	9.9	9.9
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930272

CATALOG NUMBER: DFN2DS-HX4F0-040DS950-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	11.76	13.28	12.12	13.59	13.90	7.72	9.24	8.08	9.55	9.87
	3H	13.52	14.89	13.90	15.21	15.58	8.98	10.35	9.36	10.67	11.04
	4H	14.19	15.47	14.59	15.82	16.19	9.48	10.76	9.88	11.11	11.49
	6H	14.68	15.86	15.09	16.23	16.62	9.86	11.05	10.28	11.41	11.81
	8H	14.84	15.97	15.27	16.36	16.76	9.99	11.12	10.42	11.50	11.91
	12H	14.94	16.02	15.37	16.40	16.83	10.07	11.15	10.50	11.53	11.96
4H	2H	11.86	13.14	12.26	13.49	13.87	8.41	9.69	8.81	10.04	10.42
	3H	13.79	14.86	14.20	15.26	15.66	9.85	10.92	10.27	11.32	11.72
	4H	14.54	15.50	14.97	15.91	16.35	10.45	11.41	10.89	11.83	12.26
	6H	15.13	15.97	15.59	16.41	16.87	10.94	11.77	11.40	12.22	12.68
	8H	15.35	16.13	15.81	16.57	17.04	11.10	11.88	11.57	12.33	12.79
	12H	15.50	16.20	15.98	16.67	17.15	11.22	11.92	11.70	12.39	12.87
8H	4H	14.57	15.34	15.03	15.79	16.26	10.81	11.59	11.27	12.03	12.50
	6H	15.20	15.85	15.70	16.34	16.81	11.39	12.04	11.89	12.53	13.01
	8H	15.45	16.03	15.97	16.54	17.03	11.62	12.19	12.13	12.70	13.19
	12H	15.66	16.17	16.17	16.66	17.22	11.79	12.30	12.30	12.80	13.36
12H	4H	14.55	15.25	15.03	15.72	16.19	10.85	11.55	11.33	12.02	12.50
	6H	15.18	15.76	15.70	16.27	16.76	11.46	12.04	11.97	12.55	13.03
	8H	15.47	15.98	15.98	16.47	17.04	11.73	12.24	12.24	12.73	13.30