

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: P930344

Luminaire Tested: DFN2DS-HX4F0-080DS950-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930344
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-HX4F0-080DS950-RLL
Description: 4 foot, Hexagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

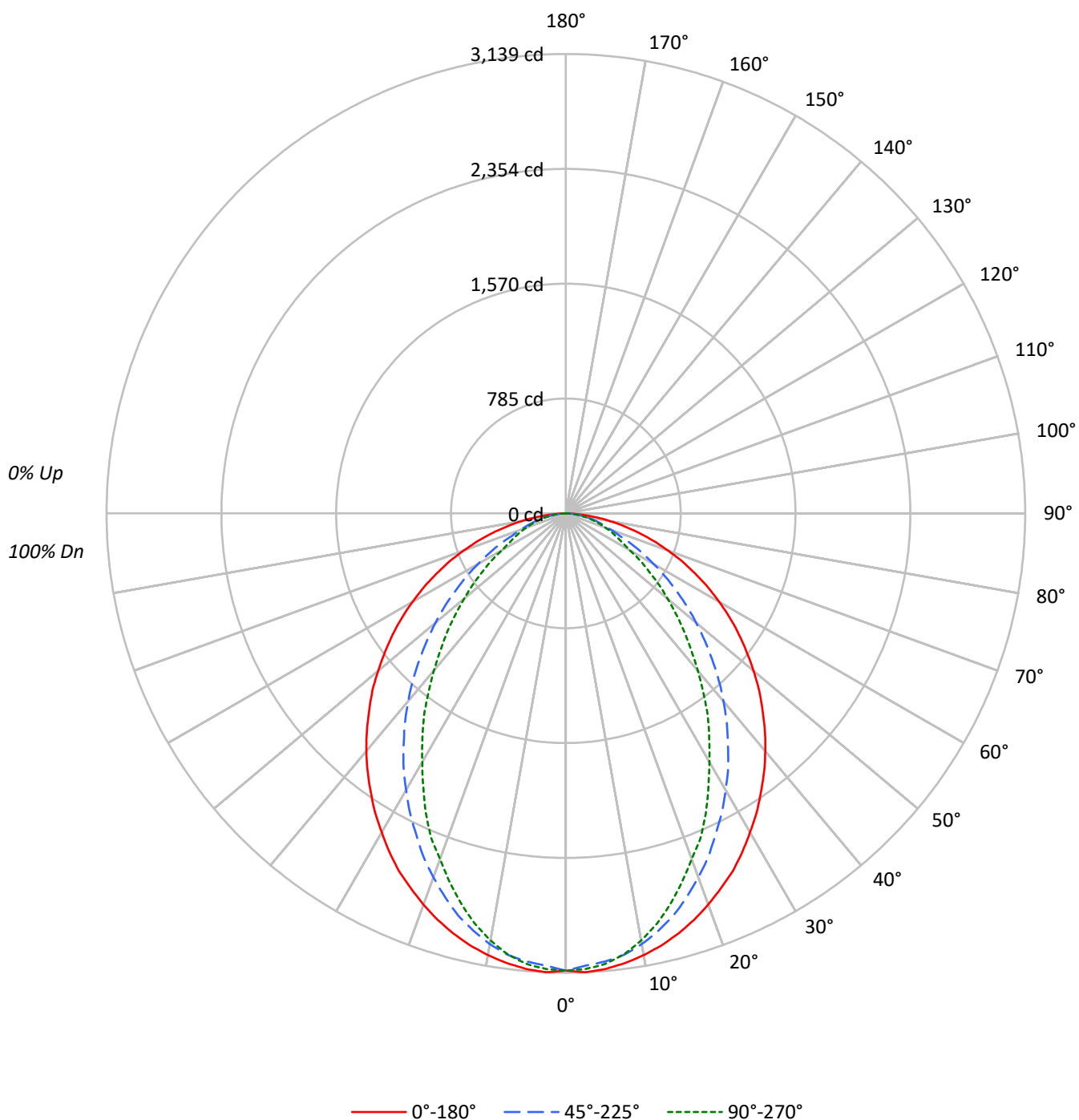
Lumens per Lamp: N/A
Luminaire Lumens: 6426.0 lumens
Efficiency: N/A
Efficacy: 78.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 4.09' x L: 3.54' x H: 0')
CIE Type: Direct

Input Watts (W): 81.5
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9613
Total Harmonic Distortion (THDi): 0.083
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930344

CATALOG NUMBER: DFN2DS-HX4F0-080DS950-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P930344

CATALOG NUMBER: DFN2DS-HX4F0-080DS950-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°	2323	2323	2323
5°	2332	2294	2307
10°	2314	2257	2237
15°	2288	2190	2127
20°	2251	2094	1989
25°	2213	1986	1856
30°	2161	1874	1685
35°	2110	1753	1535
40°	2059	1627	1361
45°	1998	1487	1204
50°	1936	1345	1050
55°	1873	1191	902
60°	1800	1030	749
65°	1716	866	681
70°	1617	713	627
75°	1494	650	585
80°	1319	581	533
85°	1037	458	458

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1998 cd/sqm

TEST NUMBER: P930344

CATALOG NUMBER: DFN2DS-HX4F0-080DS950-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	292.8	4.6
10°-20°	803.9	12.5
20°-30°	1128.6	17.6
30°-40°	1230.3	19.1
40°-50°	1130.8	17.6
50°-60°	888.0	13.8
60°-70°	578.0	9.0
70°-80°	297.5	4.6
80°-90°	76.0	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°	2225.4	34.6
0°-40°	3455.7	53.8
0°-60°	5474.5	85.2
0°-90°	6426.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6426.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3124	3124	3124	3124	3124	
5°	3124	3110	3074	3099	3091	296
15°	2972	2941	2845	2791	2763	837
25°	2698	2607	2420	2305	2262	1241
35°	2324	2180	1931	1753	1691	1455
45°	1900	1711	1414	1213	1145	1467
55°	1445	1224	919	749	696	1291
65°	976	746	492	396	387	967
75°	520	322	226	206	204	550
85°	122	62	54	54	54	146
90°	0	0	0	0	0	

TEST NUMBER: P930344

CATALOG NUMBER: DFN2DS-HX4F0-080DS950-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3124.5	3124.5	3124.5	3124.5	3124.5
2.5°	3138.6	3124.5	3093.4	3121.8	3116.1
5°	3124.5	3110.5	3073.5	3099.0	3090.6
7.5°	3099.0	3082.2	3042.6	3053.8	3039.6
10°	3065.1	3045.4	2988.9	2980.2	2963.4
12.5°	3022.9	2997.4	2920.8	2904.0	2872.8
15°	2971.8	2940.7	2844.6	2791.0	2762.7
17.5°	2912.4	2867.1	2748.3	2686.3	2640.9
20°	2844.6	2787.9	2646.7	2576.2	2513.7
22.5°	2771.1	2706.0	2542.0	2445.9	2403.6
25°	2697.6	2607.1	2420.4	2304.7	2262.0
27.5°	2610.0	2513.7	2307.3	2174.4	2109.3
30°	2516.7	2409.0	2182.9	2038.8	1962.3
32.5°	2426.1	2296.0	2064.4	1894.5	1823.8
35°	2324.4	2180.1	1931.4	1753.3	1690.8
37.5°	2225.4	2069.7	1806.9	1611.6	1541.1
40°	2120.8	1951.2	1676.7	1476.0	1402.5
42.5°	2013.3	1832.4	1546.8	1337.5	1266.9
45°	1900.2	1710.6	1413.9	1212.9	1145.2
47.5°	1792.9	1592.1	1286.7	1085.7	1023.6
50°	1674.0	1473.3	1162.3	966.9	907.8
52.5°	1557.9	1345.8	1043.4	856.8	803.2
55°	1444.8	1224.3	918.9	749.4	695.7
57.5°	1329.0	1102.8	808.8	650.4	605.1
60°	1210.2	984.0	692.7	548.7	503.4
62.5°	1094.4	868.2	593.7	458.1	435.6
65°	975.6	746.4	492.0	396.0	387.3
67.5°	862.5	633.3	396.0	347.7	339.3
70°	743.7	523.2	327.9	299.7	288.3
72.5°	630.6	421.2	274.2	251.7	246.0
75°	520.2	322.2	226.2	206.4	203.7
77.5°	410.1	228.9	178.2	166.8	161.1
80°	308.1	164.1	135.6	124.5	124.5
82.5°	214.8	110.4	93.3	87.6	87.6
85°	121.5	62.1	53.7	53.7	53.7
87.5°	45.3	22.5	22.5	19.8	19.8
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930344

CATALOG NUMBER: DFN2DS-HX4F0-080DS950-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	14.16	15.69	14.53	16.00	16.31	10.12	11.65	10.49	11.96	12.27
	3H	15.93	17.29	16.31	17.62	17.98	11.39	12.75	11.77	13.08	13.44
	4H	16.60	17.88	16.99	18.22	18.60	11.89	13.17	12.29	13.52	13.90
	6H	17.08	18.27	17.50	18.63	19.03	12.27	13.45	12.68	13.82	14.21
	8H	17.25	18.38	17.68	18.77	19.17	12.40	13.52	12.82	13.91	14.31
	12H	17.35	18.43	17.78	18.81	19.24	12.48	13.56	12.91	13.94	14.37
4H	2H	14.27	15.55	14.67	15.90	16.28	10.82	12.10	11.22	12.45	12.83
	3H	16.20	17.26	16.61	17.66	18.06	12.26	13.33	12.67	13.73	14.13
	4H	16.95	17.91	17.38	18.32	18.76	12.86	13.82	13.29	14.23	14.67
	6H	17.54	18.37	18.00	18.82	19.28	13.35	14.18	13.81	14.62	15.08
	8H	17.76	18.53	18.22	18.98	19.45	13.51	14.29	13.98	14.73	15.20
	12H	17.91	18.60	18.39	19.08	19.55	13.63	14.32	14.11	14.80	15.27
8H	4H	16.97	17.75	17.44	18.20	18.66	13.22	13.99	13.68	14.44	14.90
	6H	17.61	18.25	18.11	18.75	19.22	13.80	14.45	14.30	14.94	15.41
	8H	17.86	18.44	18.38	18.95	19.44	14.02	14.60	14.54	15.11	15.60
	12H	18.07	18.58	18.58	19.07	19.63	14.20	14.71	14.71	15.20	15.77
12H	4H	16.96	17.65	17.44	18.13	18.60	13.26	13.95	13.74	14.43	14.90
	6H	17.59	18.17	18.11	18.68	19.17	13.87	14.44	14.38	14.95	15.44
	8H	17.88	18.39	18.39	18.88	19.44	14.14	14.65	14.65	15.14	15.71