

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: P930094

Luminaire Tested: DFN2DS-HX2F0-050DS830-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930094
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-HX2F0-050DS830-RLL
Description: 2 foot, Hexagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

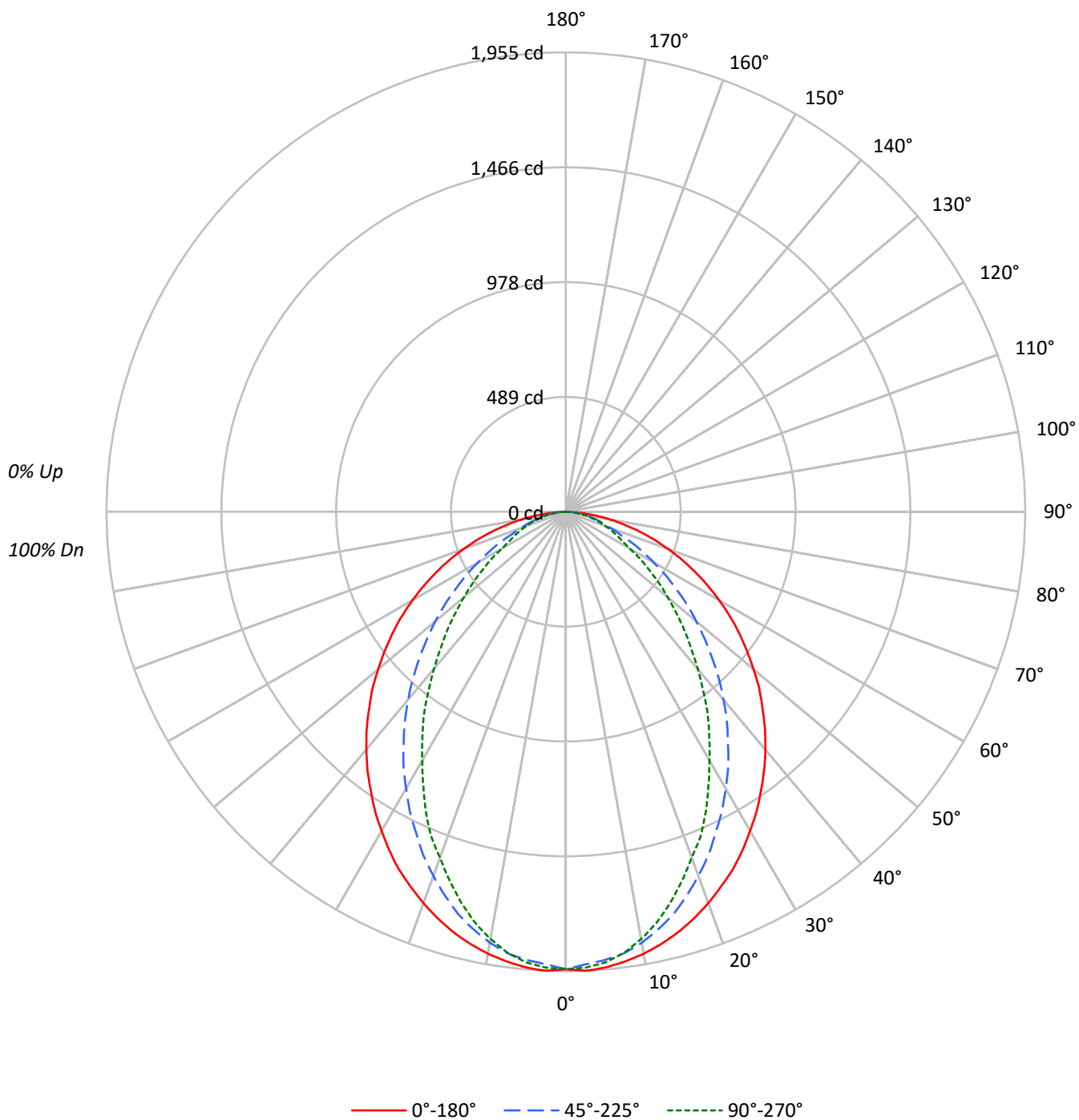
Lumens per Lamp: N/A
Luminaire Lumens: 4003.5 lumens
Efficiency: N/A
Efficacy: 80.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.3' x L: 1.99' x H: 0')
CIE Type: Direct

Input Watts (W): 49.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9789
Total Harmonic Distortion (THDi): 0.074
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930094

CATALOG NUMBER: DFN2DS-HX2F0-050DS830-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P930094

CATALOG NUMBER: DFN2DS-HX2F0-050DS830-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°	4586	4586	4586
5°	4604	4529	4554
10°	4569	4455	4417
15°	4516	4323	4198
20°	4444	4134	3927
25°	4369	3920	3664
30°	4266	3700	3326
35°	4165	3461	3030
40°	4064	3213	2688
45°	3945	2935	2377
50°	3823	2654	2073
55°	3698	2352	1780
60°	3553	2033	1478
65°	3389	1709	1345
70°	3192	1407	1237
75°	2950	1283	1155
80°	2605	1147	1052
85°	2046	903	903

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 3945 cd/sqm

TEST NUMBER: P930094

CATALOG NUMBER: DFN2DS-HX2F0-050DS830-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	182.4	4.6
10°-20°	500.8	12.5
20°-30°	703.2	17.6
30°-40°	766.5	19.1
40°-50°	704.5	17.6
50°-60°	553.3	13.8
60°-70°	360.1	9.0
70°-80°	185.4	4.6
80°-90°	47.3	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°	1386.4	34.6
0°-40°	2152.9	53.8
0°-60°	3410.7	85.2
0°-90°	4003.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4003.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1947	1947	1947	1947	1947	
5°	1947	1938	1915	1931	1926	185
15°	1852	1832	1772	1739	1721	522
25°	1681	1624	1508	1436	1409	773
35°	1448	1358	1203	1092	1053	906
45°	1184	1066	881	756	713	914
55°	900	763	572	467	433	804
65°	608	465	306	247	241	603
75°	324	201	141	129	127	343
85°	76	39	33	33	33	91
90°	0	0	0	0	0	

TEST NUMBER: P930094

CATALOG NUMBER: DFN2DS-HX2F0-050DS830-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1946.6	1946.6	1946.6	1946.6	1946.6
2.5°	1955.4	1946.6	1927.2	1944.9	1941.4
5°	1946.6	1937.9	1914.9	1930.7	1925.5
7.5°	1930.7	1920.3	1895.6	1902.6	1893.7
10°	1909.6	1897.3	1862.1	1856.8	1846.2
12.5°	1883.2	1867.4	1819.8	1809.3	1789.8
15°	1851.5	1832.1	1772.3	1738.8	1721.2
17.5°	1814.5	1786.3	1712.3	1673.6	1645.3
20°	1772.3	1737.0	1648.9	1605.0	1566.1
22.5°	1726.5	1685.9	1583.7	1523.9	1497.5
25°	1680.6	1624.2	1508.0	1435.8	1409.2
27.5°	1626.1	1566.1	1437.5	1354.7	1314.2
30°	1568.0	1500.9	1360.0	1270.2	1222.5
32.5°	1511.5	1430.4	1286.1	1180.3	1136.2
35°	1448.1	1358.3	1203.3	1092.2	1053.4
37.5°	1386.4	1289.5	1125.8	1004.1	960.2
40°	1321.2	1215.7	1044.6	919.6	873.8
42.5°	1254.4	1141.6	963.7	833.2	789.3
45°	1183.9	1065.8	880.9	755.7	713.4
47.5°	1116.9	991.9	801.6	676.5	637.7
50°	1043.0	917.9	724.1	602.4	565.6
52.5°	970.6	838.5	650.1	533.8	500.4
55°	900.2	762.7	572.5	466.9	433.4
57.5°	828.0	687.1	503.9	405.2	377.0
60°	754.0	613.1	431.5	341.9	313.6
62.5°	681.8	540.9	369.9	285.4	271.4
65°	607.8	465.1	306.5	246.7	241.3
67.5°	537.3	394.6	246.7	216.7	211.4
70°	463.4	325.9	204.3	186.7	179.6
72.5°	392.9	262.4	170.9	156.8	153.3
75°	324.1	200.7	140.9	128.6	126.9
77.5°	255.5	142.6	111.1	103.9	100.3
80°	192.0	102.2	84.5	77.5	77.5
82.5°	133.9	68.8	58.1	54.5	54.5
85°	75.7	38.7	33.4	33.4	33.4
87.5°	28.3	14.0	14.0	12.3	12.3
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930094

CATALOG NUMBER: DFN2DS-HX2F0-050DS830-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	16.53	18.05	16.89	18.36	18.68	12.49	14.01	12.85	14.32	14.64
	3H	18.29	19.66	18.67	19.98	20.35	13.75	15.12	14.13	15.45	15.81
	4H	18.96	20.24	19.36	20.59	20.97	14.25	15.53	14.65	15.88	16.26
	6H	19.45	20.63	19.86	21.00	21.39	14.63	15.82	15.05	16.18	16.58
	8H	19.61	20.74	20.04	21.13	21.53	14.76	15.89	15.19	16.27	16.68
	12H	19.72	20.79	20.15	21.18	21.61	14.84	15.92	15.27	16.30	16.73
4H	2H	16.63	17.91	17.03	18.26	18.64	13.18	14.46	13.58	14.81	15.19
	3H	18.56	19.63	18.97	20.03	20.43	14.63	15.69	15.04	16.09	16.49
	4H	19.31	20.27	19.75	20.69	21.12	15.23	16.18	15.66	16.60	17.04
	6H	19.91	20.74	20.36	21.18	21.64	15.71	16.54	16.17	16.99	17.45
	8H	20.12	20.90	20.58	21.34	21.81	15.87	16.65	16.34	17.10	17.56
	12H	20.27	20.97	20.76	21.45	21.92	15.99	16.69	16.47	17.16	17.63
8H	4H	19.34	20.11	19.80	20.56	21.03	15.58	16.36	16.04	16.80	17.27
	6H	19.98	20.62	20.47	21.11	21.59	16.17	16.81	16.66	17.30	17.78
	8H	20.23	20.80	20.74	21.31	21.80	16.39	16.96	16.90	17.47	17.96
	12H	20.43	20.94	20.94	21.43	22.00	16.56	17.07	17.07	17.57	18.13
12H	4H	19.32	20.02	19.80	20.49	20.97	15.62	16.32	16.10	16.80	17.27
	6H	19.96	20.53	20.47	21.04	21.53	16.23	16.81	16.74	17.32	17.80
	8H	20.24	20.75	20.75	21.24	21.81	16.50	17.01	17.01	17.50	18.07