

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: P930343

Luminaire Tested: DFN2DS-HX4F0-080DS950-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930343
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-HX4F0-080DS950-FLL
Description: 4 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

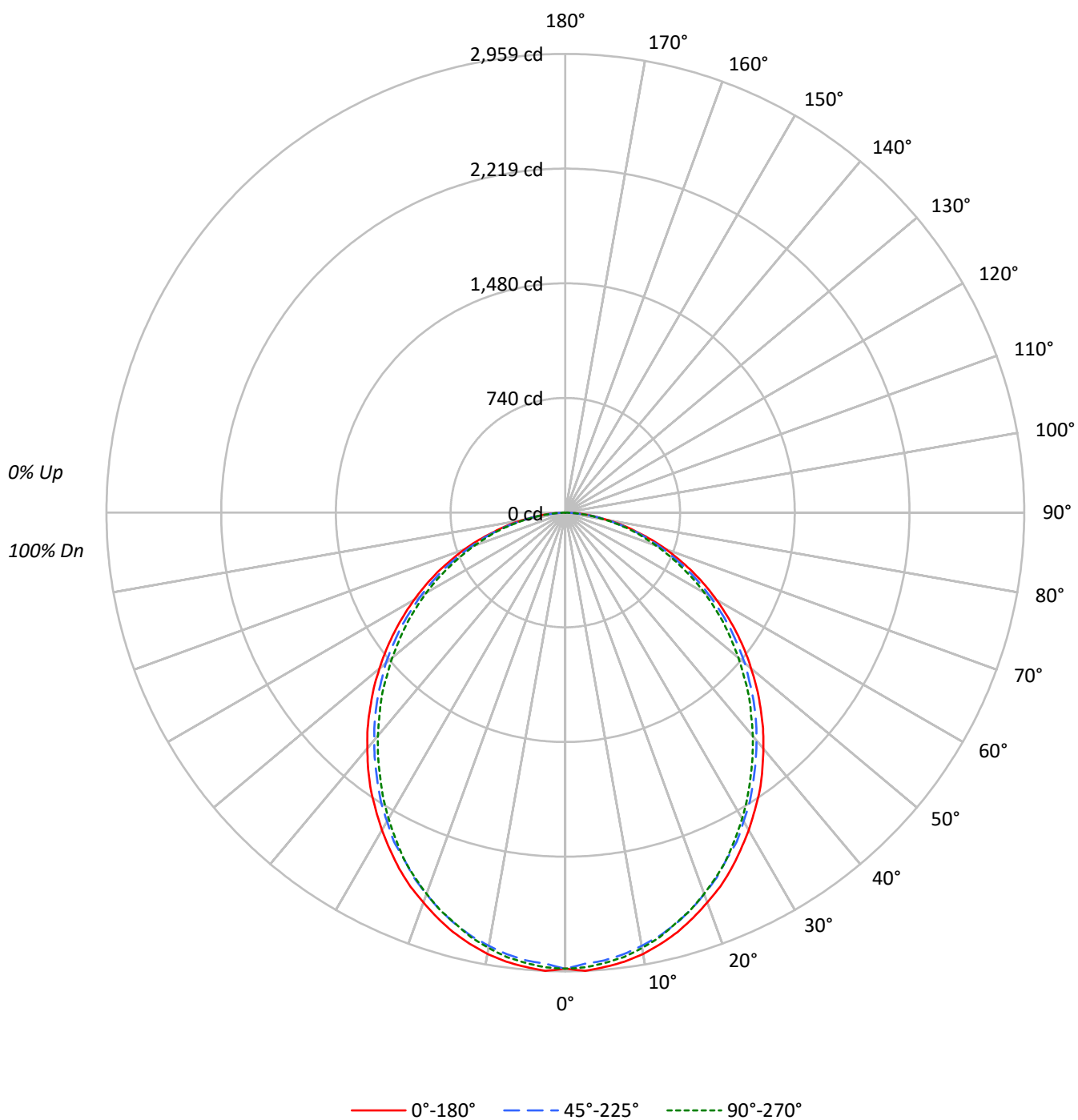
Lumens per Lamp: N/A
Luminaire Lumens: 7484.4 lumens
Efficiency: N/A
Efficacy: 91.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 4.09' x L: 3.54' x H: 0')
CIE Type: Direct

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: P930343

CATALOG NUMBER: DFN2DS-HX4F0-080DS950-FLL

Luminous Intensity Polar Plot



TEST NUMBER: P930343

CATALOG NUMBER: DFN2DS-HX4F0-080DS950-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°	2187	2187	2187
5°	2196	2164	2177
10°	2183	2142	2153
15°	2156	2114	2112
20°	2117	2073	2070
25°	2079	2021	2021
30°	2030	1975	1958
35°	1985	1918	1890
40°	1928	1861	1826
45°	1871	1805	1761
50°	1809	1747	1685
55°	1746	1680	1617
60°	1674	1599	1540
65°	1598	1518	1448
70°	1501	1421	1353
75°	1365	1308	1276
80°	1212	1175	1114
85°	989	943	845

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1871 cd/sqm

TEST NUMBER: P930343

CATALOG NUMBER: DFN2DS-HX4F0-080DS950-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	276.9	3.7
10°-20°	779.0	10.4
20°-30°	1144.8	15.3
30°-40°	1329.6	17.8
40°-50°	1328.0	17.7
50°-60°	1158.0	15.5
60°-70°	856.0	11.4
70°-80°	484.3	6.5
80°-90°	127.8	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°	2200.7	29.4
0°-40°	3530.3	47.2
0°-60°	6016.3	80.4
0°-90°	7484.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7484.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2942	2942	2942	2942	2942	
5°	2942	2930	2899	2922	2916	279
15°	2800	2784	2746	2758	2744	789
25°	2534	2512	2464	2469	2464	1166
35°	2186	2158	2113	2096	2082	1365
45°	1779	1760	1717	1686	1675	1373
55°	1346	1329	1296	1262	1248	1204
65°	908	891	863	837	823	898
75°	475	470	455	438	444	507
85°	116	113	110	102	99	136
90°	0	0	0	0	0	

TEST NUMBER: P930343

CATALOG NUMBER: DFN2DS-HX4F0-080DS950-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2941.6	2941.6	2941.6	2941.6	2941.6
2.5°	2958.7	2944.6	2913.4	2941.6	2936.2
5°	2941.6	2930.5	2899.4	2921.8	2916.5
7.5°	2921.8	2905.0	2873.8	2896.6	2890.9
10°	2890.9	2871.1	2837.2	2859.7	2851.3
12.5°	2848.3	2831.5	2797.6	2811.7	2806.0
15°	2800.3	2783.5	2746.5	2758.0	2743.9
17.5°	2740.9	2724.1	2687.1	2701.3	2687.1
20°	2675.8	2658.9	2619.4	2627.8	2616.6
22.5°	2610.9	2585.4	2548.5	2548.5	2542.8
25°	2534.4	2511.9	2463.9	2469.3	2463.9
27.5°	2449.4	2429.7	2393.0	2384.6	2370.5
30°	2364.9	2342.0	2299.8	2291.3	2279.9
32.5°	2274.2	2257.4	2212.1	2195.0	2183.6
35°	2186.5	2158.4	2113.0	2095.9	2081.8
37.5°	2087.5	2062.0	2016.7	1996.9	1982.8
40°	1985.8	1963.0	1917.7	1892.5	1881.0
42.5°	1886.8	1863.9	1818.9	1790.4	1773.7
45°	1779.3	1759.5	1716.9	1686.0	1674.6
47.5°	1674.6	1654.8	1609.4	1578.2	1561.4
50°	1564.2	1550.1	1510.4	1470.8	1456.7
52.5°	1456.7	1436.9	1400.3	1369.1	1349.3
55°	1346.5	1329.4	1295.6	1261.7	1247.5
57.5°	1236.2	1222.1	1185.1	1151.2	1139.8
60°	1125.7	1114.6	1074.9	1043.8	1035.3
62.5°	1018.2	998.5	970.2	942.1	930.6
65°	908.1	891.0	862.8	837.3	823.2
67.5°	794.9	780.6	755.3	735.6	724.2
70°	690.2	678.8	653.4	633.5	622.4
72.5°	582.8	571.4	557.3	537.5	529.1
75°	475.1	469.7	455.3	438.5	444.2
77.5°	379.0	367.6	361.9	353.5	345.1
80°	283.0	280.0	274.3	265.9	260.2
82.5°	192.4	192.4	189.7	178.2	178.2
85°	115.9	113.1	110.5	101.8	99.0
87.5°	51.0	45.4	39.6	31.2	28.3
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930343

CATALOG NUMBER: DFN2DS-HX4F0-080DS950-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	14.00	15.61	14.37	15.93	16.24	13.56	15.17	13.92	15.48	15.80
	3H	15.75	17.21	16.13	17.53	17.89	15.26	16.72	15.64	17.04	17.40
	4H	16.40	17.77	16.80	18.12	18.49	15.90	17.27	16.30	17.62	18.00
	6H	16.87	18.14	17.28	18.50	18.89	16.37	17.63	16.78	18.00	18.39
	8H	17.01	18.22	17.44	18.61	19.01	16.51	17.72	16.93	18.11	18.51
	12H	17.10	18.26	17.53	18.64	19.07	16.59	17.75	17.02	18.13	18.56
4H	2H	14.56	15.93	14.96	16.28	16.66	14.21	15.58	14.61	15.93	16.30
	3H	16.54	17.68	16.95	18.08	18.48	16.13	17.28	16.54	17.67	18.07
	4H	17.31	18.35	17.75	18.76	19.20	16.89	17.93	17.32	18.34	18.78
	6H	17.91	18.82	18.36	19.26	19.71	17.48	18.38	17.93	18.82	19.28
	8H	18.10	18.95	18.56	19.39	19.85	17.66	18.51	18.12	18.95	19.42
	12H	18.23	18.99	18.71	19.47	19.94	17.78	18.54	18.26	19.02	19.48
8H	4H	17.59	18.43	18.05	18.88	19.34	17.21	18.06	17.67	18.50	18.97
	6H	18.30	19.00	18.80	19.49	19.97	17.92	18.62	18.41	19.11	19.59
	8H	18.56	19.19	19.07	19.70	20.18	18.17	18.80	18.68	19.31	19.79
	12H	18.76	19.32	19.27	19.81	20.37	18.35	18.91	18.85	19.40	19.96
12H	4H	17.61	18.37	18.09	18.85	19.32	17.25	18.01	17.73	18.48	18.95
	6H	18.35	18.98	18.86	19.49	19.97	17.98	18.61	18.49	19.12	19.60
	8H	18.66	19.22	19.17	19.71	20.27	18.28	18.84	18.79	19.33	19.89