

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: P930341

Luminaire Tested: DFN2DS-HX4F0-080DS940-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930341
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-HX4F0-080DS940-FLL
Description: 4 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

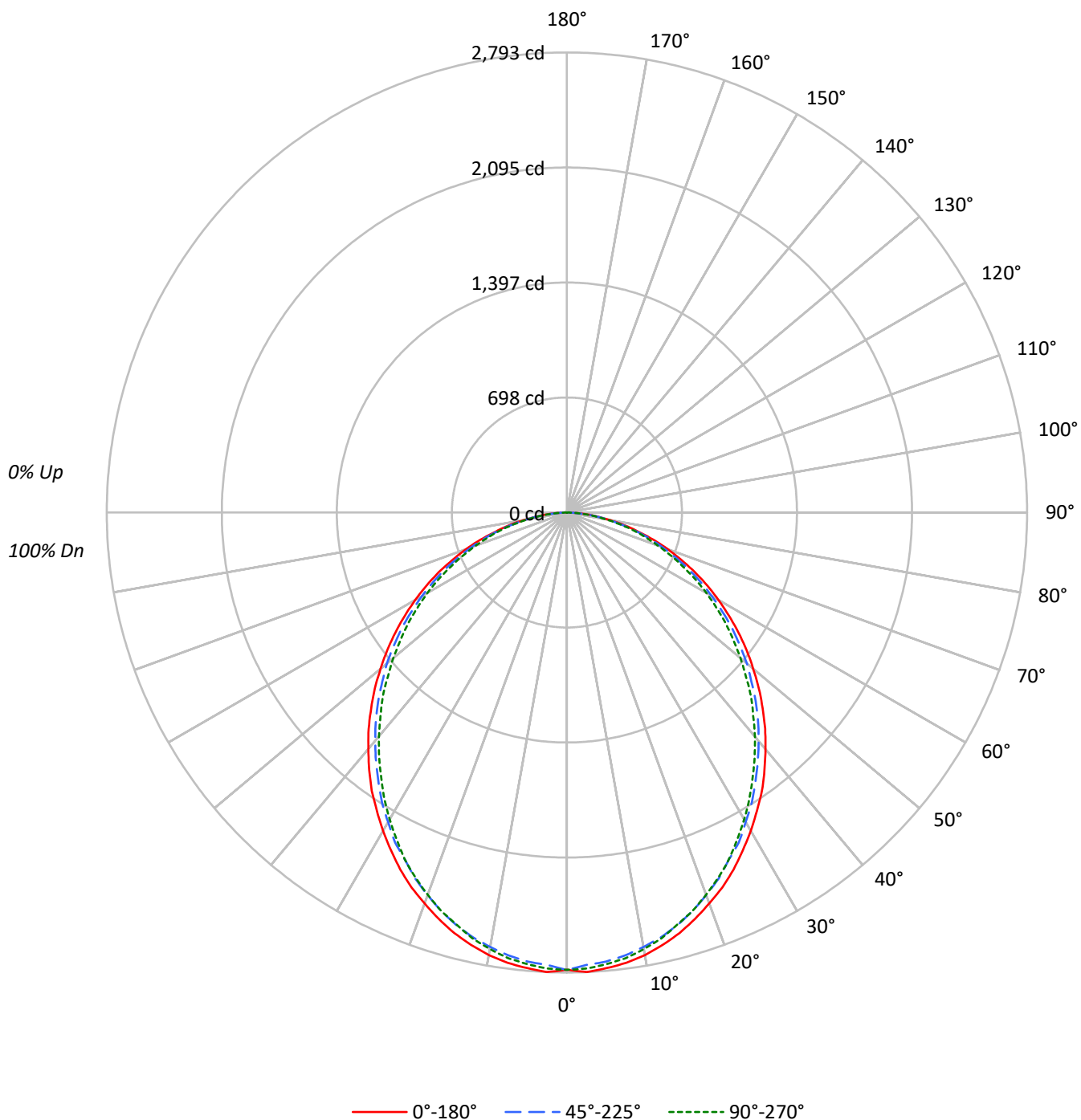
Lumens per Lamp: N/A
Luminaire Lumens: 7064.6 lumens
Efficiency: N/A
Efficacy: 86.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 4.09' x L: 3.54' x H: 0')
CIE Type: Direct

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: P930341

CATALOG NUMBER: DFN2DS-HX4F0-080DS940-FLL

Luminous Intensity Polar Plot



TEST NUMBER: P930341

CATALOG NUMBER: DFN2DS-HX4F0-080DS940-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°	2065	2065	2065
5°	2072	2043	2055
10°	2060	2022	2032
15°	2035	1996	1994
20°	1999	1956	1954
25°	1963	1908	1908
30°	1917	1864	1848
35°	1873	1810	1784
40°	1819	1757	1723
45°	1766	1704	1662
50°	1708	1649	1591
55°	1648	1585	1526
60°	1580	1509	1453
65°	1508	1433	1367
70°	1416	1341	1277
75°	1288	1235	1204
80°	1144	1109	1052
85°	933	890	798

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1766 cd/sqm

TEST NUMBER: P930341

CATALOG NUMBER: DFN2DS-HX4F0-080DS940-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	261.3	3.7
10°-20°	735.3	10.4
20°-30°	1080.6	15.3
30°-40°	1255.1	17.8
40°-50°	1253.5	17.7
50°-60°	1093.0	15.5
60°-70°	808.0	11.4
70°-80°	457.1	6.5
80°-90°	120.7	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°	2077.3	29.4
0°-40°	3332.3	47.2
0°-60°	5678.8	80.4
0°-90°	7064.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7064.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2777	2777	2777	2777	2777	
5°	2777	2766	2737	2758	2753	264
15°	2643	2627	2592	2603	2590	744
25°	2392	2371	2326	2331	2326	1101
35°	2064	2037	1994	1978	1965	1289
45°	1680	1661	1621	1591	1581	1296
55°	1271	1255	1223	1191	1178	1136
65°	857	841	814	790	777	847
75°	448	443	430	414	419	479
85°	109	107	104	96	94	129
90°	0	0	0	0	0	

TEST NUMBER: P930341

CATALOG NUMBER: DFN2DS-HX4F0-080DS940-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2776.6	2776.6	2776.6	2776.6	2776.6
2.5°	2792.8	2779.5	2750.0	2776.6	2771.5
5°	2776.6	2766.2	2736.7	2758.0	2752.9
7.5°	2758.0	2742.1	2712.7	2734.2	2728.8
10°	2728.8	2710.1	2678.1	2699.3	2691.4
12.5°	2688.6	2672.7	2640.7	2654.0	2648.6
15°	2643.3	2627.4	2592.5	2603.3	2590.0
17.5°	2587.2	2571.3	2536.4	2549.8	2536.4
20°	2525.7	2509.8	2472.4	2480.4	2469.9
22.5°	2464.5	2440.4	2405.5	2405.5	2400.2
25°	2392.3	2371.0	2325.7	2330.8	2325.7
27.5°	2312.1	2293.4	2258.8	2250.9	2237.6
30°	2232.2	2210.6	2170.8	2162.8	2152.0
32.5°	2146.7	2130.8	2088.0	2071.8	2061.1
35°	2063.9	2037.3	1994.5	1978.4	1965.1
37.5°	1970.4	1946.3	1903.6	1884.9	1871.6
40°	1874.4	1852.9	1810.1	1786.3	1775.5
42.5°	1781.0	1759.4	1716.9	1690.0	1674.2
45°	1679.5	1660.8	1620.6	1591.4	1580.7
47.5°	1580.7	1562.0	1519.2	1489.7	1473.9
50°	1476.4	1463.1	1425.7	1388.3	1375.0
52.5°	1375.0	1356.3	1321.8	1292.3	1273.6
55°	1271.0	1254.9	1222.9	1190.9	1177.5
57.5°	1166.8	1153.5	1118.7	1086.6	1075.8
60°	1062.6	1052.1	1014.6	985.2	977.3
62.5°	961.1	942.5	915.8	889.2	878.4
65°	857.2	841.1	814.4	790.3	777.0
67.5°	750.4	736.8	713.0	694.3	683.5
70°	651.5	640.7	616.7	598.0	587.5
72.5°	550.1	539.4	526.0	507.4	499.4
75°	448.4	443.3	429.8	413.9	419.2
77.5°	357.8	347.0	341.6	333.7	325.8
80°	267.2	264.3	258.9	251.0	245.6
82.5°	181.6	181.6	179.0	168.2	168.2
85°	109.4	106.8	104.3	96.1	93.5
87.5°	48.2	42.8	37.4	29.4	26.7
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930341

CATALOG NUMBER: DFN2DS-HX4F0-080DS940-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	13.80	15.41	14.17	15.73	16.04	13.36	14.97	13.72	15.28	15.60
	3H	15.55	17.01	15.93	17.33	17.69	15.06	16.51	15.44	16.84	17.20
	4H	16.20	17.57	16.60	17.91	18.29	15.70	17.07	16.10	17.42	17.80
	6H	16.67	17.94	17.08	18.30	18.69	16.17	17.43	16.58	17.80	18.19
	8H	16.81	18.02	17.23	18.41	18.81	16.31	17.52	16.73	17.91	18.31
	12H	16.90	18.06	17.33	18.44	18.87	16.39	17.55	16.82	17.93	18.36
4H	2H	14.36	15.73	14.76	16.08	16.45	14.01	15.38	14.41	15.73	16.10
	3H	16.34	17.48	16.75	17.88	18.28	15.93	17.08	16.34	17.47	17.87
	4H	17.11	18.15	17.54	18.56	19.00	16.69	17.73	17.12	18.14	18.58
	6H	17.71	18.61	18.16	19.06	19.51	17.28	18.18	17.73	18.62	19.08
	8H	17.90	18.75	18.36	19.19	19.65	17.46	18.31	17.92	18.75	19.22
	12H	18.03	18.79	18.51	19.27	19.74	17.58	18.34	18.06	18.81	19.28
8H	4H	17.39	18.23	17.85	18.68	19.14	17.01	17.86	17.47	18.30	18.77
	6H	18.10	18.80	18.59	19.29	19.77	17.72	18.42	18.21	18.91	19.39
	8H	18.36	18.99	18.87	19.50	19.98	17.97	18.60	18.48	19.11	19.59
	12H	18.56	19.12	19.07	19.61	20.17	18.15	18.70	18.65	19.20	19.76
12H	4H	17.41	18.17	17.89	18.65	19.12	17.05	17.81	17.53	18.28	18.75
	6H	18.15	18.78	18.66	19.28	19.77	17.78	18.41	18.29	18.92	19.40
	8H	18.46	19.02	18.97	19.51	20.07	18.08	18.64	18.59	19.13	19.69