

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: P930097

Luminaire Tested: DFN2DS-HX2F0-050DS840-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930097
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-HX2F0-050DS840-FLL
Description: 2 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

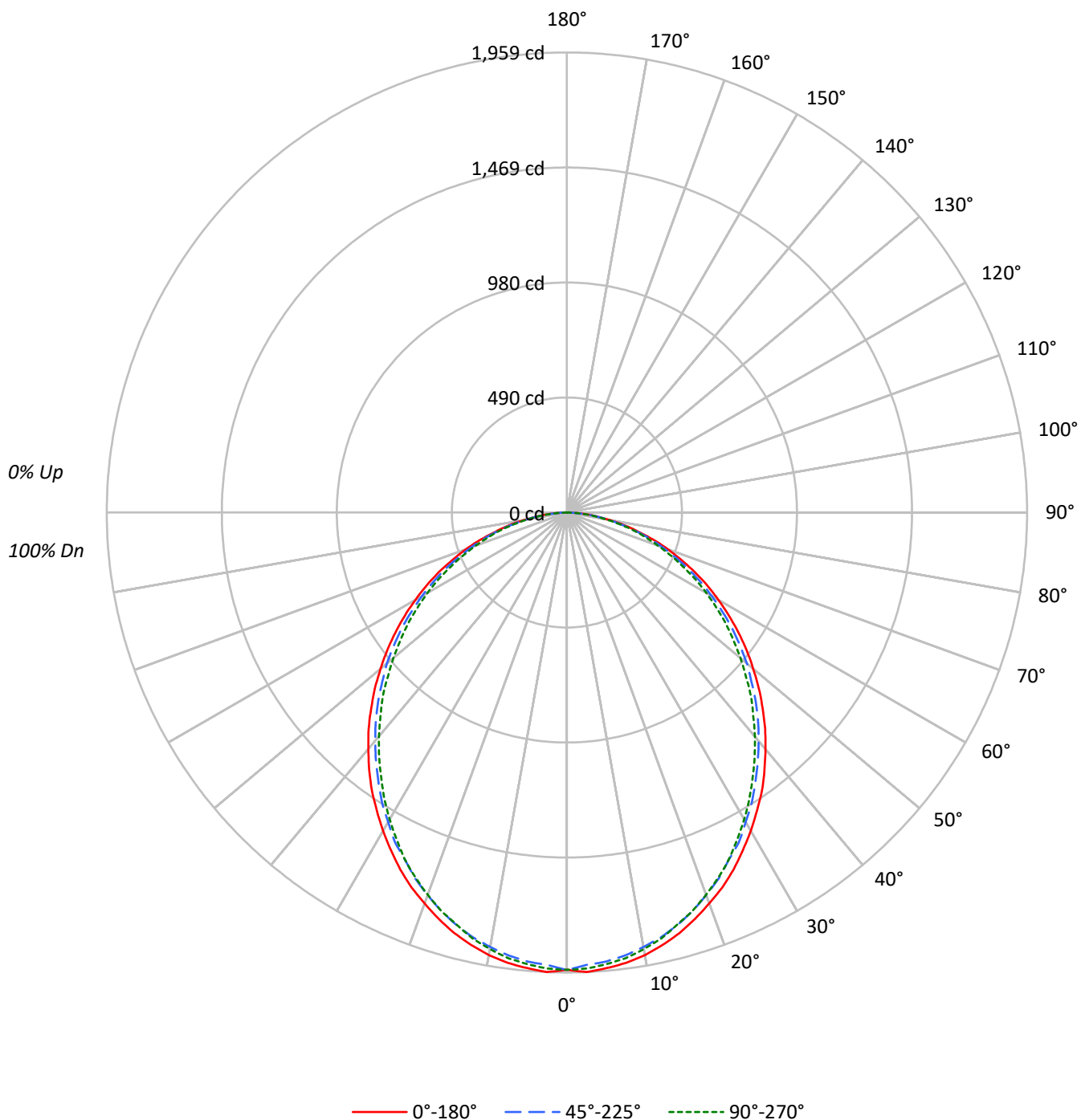
Lumens per Lamp: N/A
Luminaire Lumens: 4955.0 lumens
Efficiency: N/A
Efficacy: 99.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.3' x L: 1.99' x H: 0')
CIE Type: Direct

Input Watts (W): 49.9
Input Voltage (V): 120
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: P930097

CATALOG NUMBER: DFN2DS-HX2F0-050DS840-FLL

Luminous Intensity Polar Plot



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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°	4588	4588	4588
5°	4606	4540	4567
10°	4579	4494	4516
15°	4522	4435	4431
20°	4442	4348	4343
25°	4362	4240	4240
30°	4259	4142	4107
35°	4163	4024	3964
40°	4044	3905	3830
45°	3925	3787	3694
50°	3796	3666	3535
55°	3662	3523	3393
60°	3512	3354	3230
65°	3352	3184	3038
70°	3148	2979	2839
75°	2863	2744	2677
80°	2543	2464	2338
85°	2073	1976	1773

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3925 cd/sqm

TEST NUMBER: P930097

CATALOG NUMBER: DFN2DS-HX2F0-050DS840-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	183.3	3.7
10°-20°	515.7	10.4
20°-30°	757.9	15.3
30°-40°	880.3	17.8
40°-50°	879.2	17.7
50°-60°	766.6	15.5
60°-70°	566.7	11.4
70°-80°	320.6	6.5
80°-90°	84.6	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°	1456.9	29.4
0°-40°	2337.2	47.2
0°-60°	3983.0	80.4
0°-90°	4955.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4955.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1947	1947	1947	1947	1947	
5°	1947	1940	1919	1934	1931	185
15°	1854	1843	1818	1826	1816	522
25°	1678	1663	1631	1635	1631	772
35°	1448	1429	1399	1388	1378	904
45°	1178	1165	1137	1116	1109	909
55°	892	880	858	835	826	797
65°	601	590	571	554	545	594
75°	314	311	301	290	294	336
85°	77	75	73	67	66	90
90°	0	0	0	0	0	

TEST NUMBER: P930097

CATALOG NUMBER: DFN2DS-HX2F0-050DS840-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1947.4	1947.4	1947.4	1947.4	1947.4
2.5°	1958.8	1949.4	1928.8	1947.4	1943.9
5°	1947.4	1940.1	1919.4	1934.3	1930.8
7.5°	1934.3	1923.2	1902.6	1917.7	1913.9
10°	1913.9	1900.8	1878.4	1893.2	1887.7
12.5°	1885.7	1874.6	1852.2	1861.5	1857.7
15°	1853.9	1842.7	1818.3	1825.9	1816.5
17.5°	1814.5	1803.4	1779.0	1788.3	1779.0
20°	1771.5	1760.4	1734.1	1739.6	1732.3
22.5°	1728.5	1711.6	1687.2	1687.2	1683.4
25°	1677.9	1663.0	1631.1	1634.7	1631.1
27.5°	1621.6	1608.5	1584.3	1578.7	1569.4
30°	1565.6	1550.5	1522.5	1516.9	1509.4
32.5°	1505.6	1494.5	1464.5	1453.2	1445.6
35°	1447.5	1428.9	1398.9	1387.6	1378.3
37.5°	1382.0	1365.2	1335.1	1322.0	1312.7
40°	1314.7	1299.6	1269.6	1252.9	1245.3
42.5°	1249.1	1234.0	1204.2	1185.3	1174.2
45°	1178.0	1164.9	1136.6	1116.2	1108.6
47.5°	1108.6	1095.5	1065.6	1044.8	1033.7
50°	1035.5	1026.2	1000.0	973.8	964.4
52.5°	964.4	951.3	927.0	906.4	893.3
55°	891.5	880.2	857.7	835.2	825.9
57.5°	818.3	809.0	784.6	762.2	754.6
60°	745.2	737.9	711.7	691.0	685.5
62.5°	674.2	661.1	642.3	623.6	616.1
65°	601.2	589.9	571.2	554.4	544.9
67.5°	526.3	516.8	500.1	487.0	479.4
70°	457.0	449.4	432.5	419.4	412.1
72.5°	385.9	378.3	369.0	355.9	350.2
75°	314.5	310.9	301.4	290.3	294.1
77.5°	251.0	243.3	239.6	234.0	228.5
80°	187.4	185.4	181.6	176.1	172.3
82.5°	127.3	127.3	125.5	118.0	118.0
85°	76.7	74.9	73.1	67.4	65.6
87.5°	33.7	30.0	26.2	20.6	18.7
90°	0.0	0.0	0.0	0.0	0.0

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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	16.58	18.19	16.94	18.50	18.81	16.13	17.74	16.50	18.06	18.37
	3H	18.33	19.78	18.70	20.11	20.47	17.84	19.29	18.21	19.62	19.98
	4H	18.97	20.34	19.37	20.69	21.07	18.48	19.85	18.88	20.19	20.57
	6H	19.44	20.71	19.85	21.07	21.47	18.94	20.21	19.35	20.57	20.96
	8H	19.58	20.80	20.01	21.18	21.58	19.08	20.29	19.51	20.68	21.08
	12H	19.67	20.83	20.10	21.22	21.65	19.16	20.32	19.59	20.70	21.13
4H	2H	17.14	18.51	17.53	18.85	19.23	16.78	18.15	17.18	18.50	18.88
	3H	19.11	20.26	19.52	20.66	21.06	18.70	19.85	19.11	20.25	20.65
	4H	19.89	20.92	20.32	21.34	21.77	19.46	20.50	19.90	20.91	21.35
	6H	20.48	21.39	20.94	21.83	22.29	20.05	20.96	20.51	21.40	21.85
	8H	20.67	21.52	21.13	21.96	22.43	20.24	21.08	20.70	21.53	21.99
	12H	20.81	21.57	21.29	22.04	22.51	20.35	21.11	20.83	21.59	22.06
8H	4H	20.16	21.01	20.62	21.45	21.92	19.79	20.63	20.25	21.08	21.54
	6H	20.88	21.58	21.37	22.07	22.54	20.49	21.20	20.99	21.69	22.16
	8H	21.13	21.77	21.64	22.27	22.76	20.74	21.37	21.25	21.88	22.37
	12H	21.33	21.89	21.84	22.38	22.94	20.92	21.48	21.43	21.97	22.53
12H	4H	20.19	20.95	20.67	21.42	21.89	19.82	20.58	20.30	21.06	21.53
	6H	20.92	21.55	21.43	22.06	22.55	20.55	21.18	21.06	21.69	22.18
	8H	21.23	21.79	21.74	22.28	22.84	20.86	21.41	21.36	21.91	22.47