

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: P930177

Luminaire Tested: DFN2DS-HX3F0-050DS935-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930177
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-HX3F0-050DS935-FLL
Description: 3 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

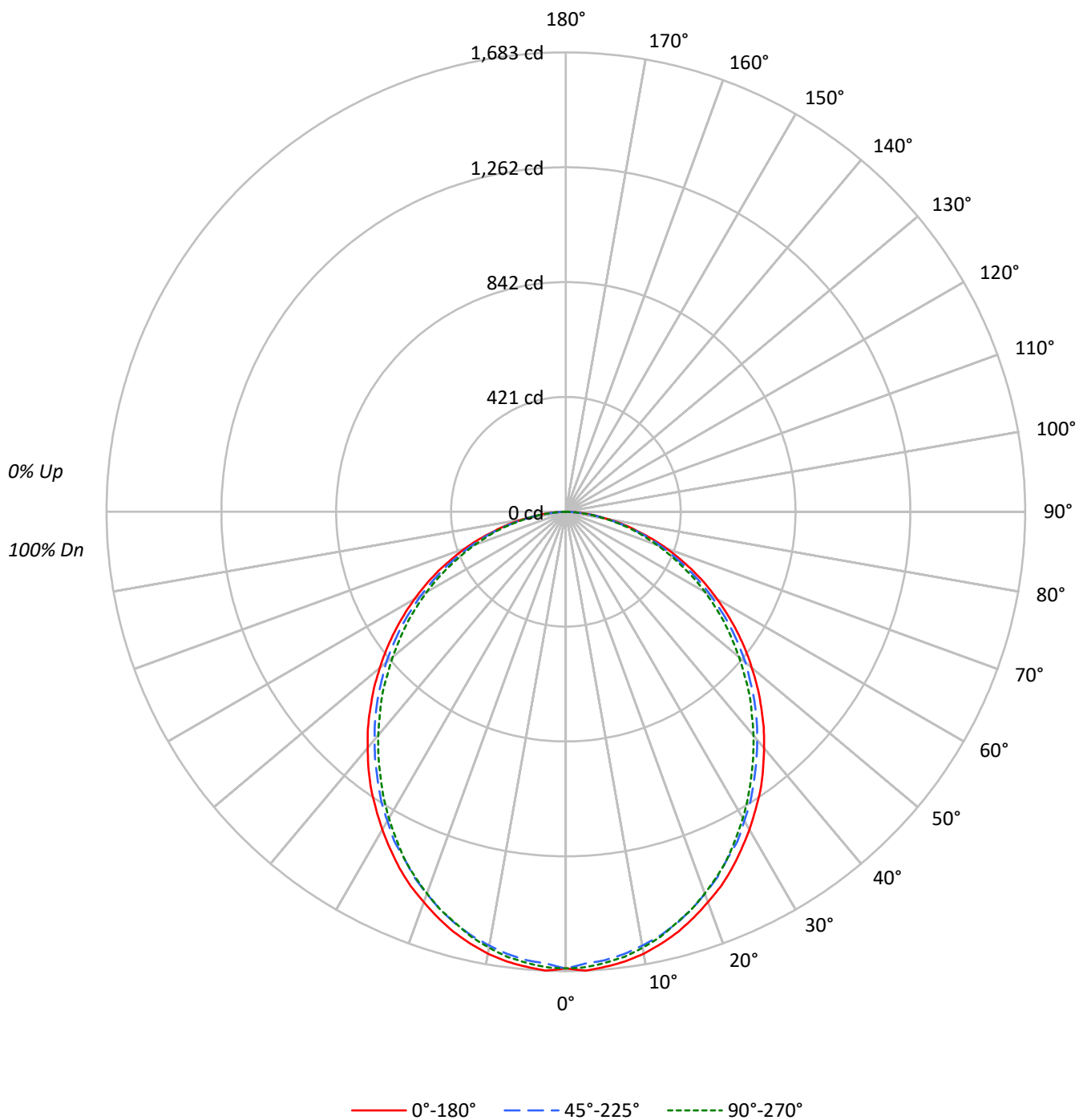
Lumens per Lamp: N/A
Luminaire Lumens: 4257.0 lumens
Efficiency: N/A
Efficacy: 86.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.28' x L: 2.84' x H: 0')
CIE Type: Direct

Input Watts (W): 49.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9951
Total Harmonic Distortion (THDi): 0.07
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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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°	1938	1938	1938
5°	1945	1917	1929
10°	1934	1898	1908
15°	1910	1873	1871
20°	1876	1837	1835
25°	1842	1791	1791
30°	1799	1750	1735
35°	1759	1699	1674
40°	1708	1649	1618
45°	1658	1600	1560
50°	1603	1548	1493
55°	1547	1488	1433
60°	1483	1417	1364
65°	1416	1345	1283
70°	1330	1259	1199
75°	1209	1159	1131
80°	1074	1041	987
85°	876	835	748

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1658 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.5	3.7
10°-20°	443.1	10.4
20°-30°	651.1	15.3
30°-40°	756.3	17.8
40°-50°	755.3	17.7
50°-60°	658.6	15.5
60°-70°	486.9	11.4
70°-80°	275.5	6.5
80°-90°	72.7	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°	1251.7	29.4
0°-40°	2008.0	47.2
0°-60°	3421.9	80.4
0°-90°	4257.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4257.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1673	1673	1673	1673	1673	
5°	1673	1667	1649	1662	1659	159
15°	1593	1583	1562	1569	1561	449
25°	1442	1429	1401	1404	1401	663
35°	1244	1228	1202	1192	1184	777
45°	1012	1001	976	959	952	781
55°	766	756	737	718	710	685
65°	516	507	491	476	468	511
75°	270	267	259	249	253	288
85°	66	64	63	58	56	77
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1673.1	1673.1	1673.1	1673.1	1673.1
2.5°	1682.8	1674.8	1657.1	1673.1	1670.1
5°	1673.1	1666.9	1649.0	1661.9	1658.9
7.5°	1661.9	1652.3	1634.6	1647.6	1644.3
10°	1644.3	1633.1	1613.8	1626.5	1621.8
12.5°	1620.1	1610.5	1591.3	1599.3	1596.0
15°	1592.7	1583.2	1562.2	1568.7	1560.6
17.5°	1558.9	1549.4	1528.4	1536.4	1528.4
20°	1521.9	1512.4	1489.9	1494.6	1488.3
22.5°	1485.0	1470.5	1449.5	1449.5	1446.3
25°	1441.5	1428.7	1401.4	1404.5	1401.4
27.5°	1393.2	1381.9	1361.1	1356.3	1348.3
30°	1345.0	1332.1	1308.1	1303.2	1296.8
32.5°	1293.5	1284.0	1258.2	1248.5	1242.0
35°	1243.6	1227.6	1201.8	1192.1	1184.1
37.5°	1187.3	1172.9	1147.1	1135.8	1127.8
40°	1129.5	1116.5	1090.7	1076.4	1069.9
42.5°	1073.2	1060.2	1034.6	1018.3	1008.8
45°	1012.0	1000.8	976.5	959.0	952.4
47.5°	952.4	941.2	915.5	897.7	888.1
50°	889.7	881.7	859.1	836.6	828.5
52.5°	828.5	817.3	796.4	778.7	767.5
55°	765.9	756.2	736.8	717.6	709.6
57.5°	703.0	695.1	674.1	654.8	648.3
60°	640.3	634.0	611.5	593.7	588.9
62.5°	579.2	567.9	551.9	535.8	529.3
65°	516.5	506.8	490.7	476.3	468.2
67.5°	452.2	444.0	429.7	418.4	411.9
70°	392.6	386.1	371.6	360.3	354.1
72.5°	331.5	325.0	317.0	305.7	300.9
75°	270.2	267.1	258.9	249.4	252.7
77.5°	215.6	209.1	205.9	201.1	196.3
80°	161.0	159.3	156.0	151.3	148.0
82.5°	109.4	109.4	107.8	101.4	101.4
85°	65.9	64.3	62.8	57.9	56.3
87.5°	29.0	25.8	22.5	17.7	16.1
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	13.58	15.19	13.95	15.51	15.82	13.14	14.75	13.50	15.06	15.38
	3H	15.33	16.79	15.71	17.11	17.47	14.84	16.30	15.22	16.62	16.98
	4H	15.98	17.35	16.38	17.69	18.07	15.48	16.85	15.88	17.20	17.58
	6H	16.45	17.72	16.86	18.08	18.47	15.95	17.21	16.36	17.58	17.97
	8H	16.59	17.80	17.02	18.19	18.59	16.09	17.30	16.51	17.69	18.09
	12H	16.68	17.84	17.11	18.22	18.65	16.17	17.33	16.60	17.71	18.14
4H	2H	14.14	15.51	14.54	15.86	16.23	13.79	15.16	14.19	15.51	15.88
	3H	16.12	17.26	16.53	17.66	18.06	15.71	16.86	16.12	17.25	17.65
	4H	16.89	17.93	17.32	18.34	18.78	16.47	17.51	16.90	17.92	18.36
	6H	17.49	18.39	17.94	18.84	19.29	17.06	17.96	17.51	18.40	18.86
	8H	17.68	18.53	18.14	18.97	19.43	17.24	18.09	17.70	18.53	19.00
	12H	17.81	18.57	18.29	19.05	19.52	17.36	18.12	17.84	18.60	19.06
8H	4H	17.17	18.01	17.63	18.46	18.92	16.79	17.64	17.25	18.08	18.55
	6H	17.88	18.58	18.38	19.07	19.55	17.50	18.20	17.99	18.69	19.17
	8H	18.14	18.77	18.65	19.28	19.76	17.75	18.38	18.26	18.89	19.37
	12H	18.34	18.90	18.85	19.39	19.95	17.93	18.49	18.43	18.98	19.54
12H	4H	17.19	17.95	17.67	18.43	18.90	16.83	17.59	17.31	18.06	18.53
	6H	17.93	18.56	18.44	19.07	19.55	17.56	18.19	18.07	18.70	19.18
	8H	18.24	18.80	18.75	19.29	19.85	17.86	18.42	18.37	18.91	19.47