

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: P930182

Luminaire Tested: DFN2DS-HX3F0-050DS950-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930182
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-HX3F0-050DS950-RLL
Description: 3 foot, Hexagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

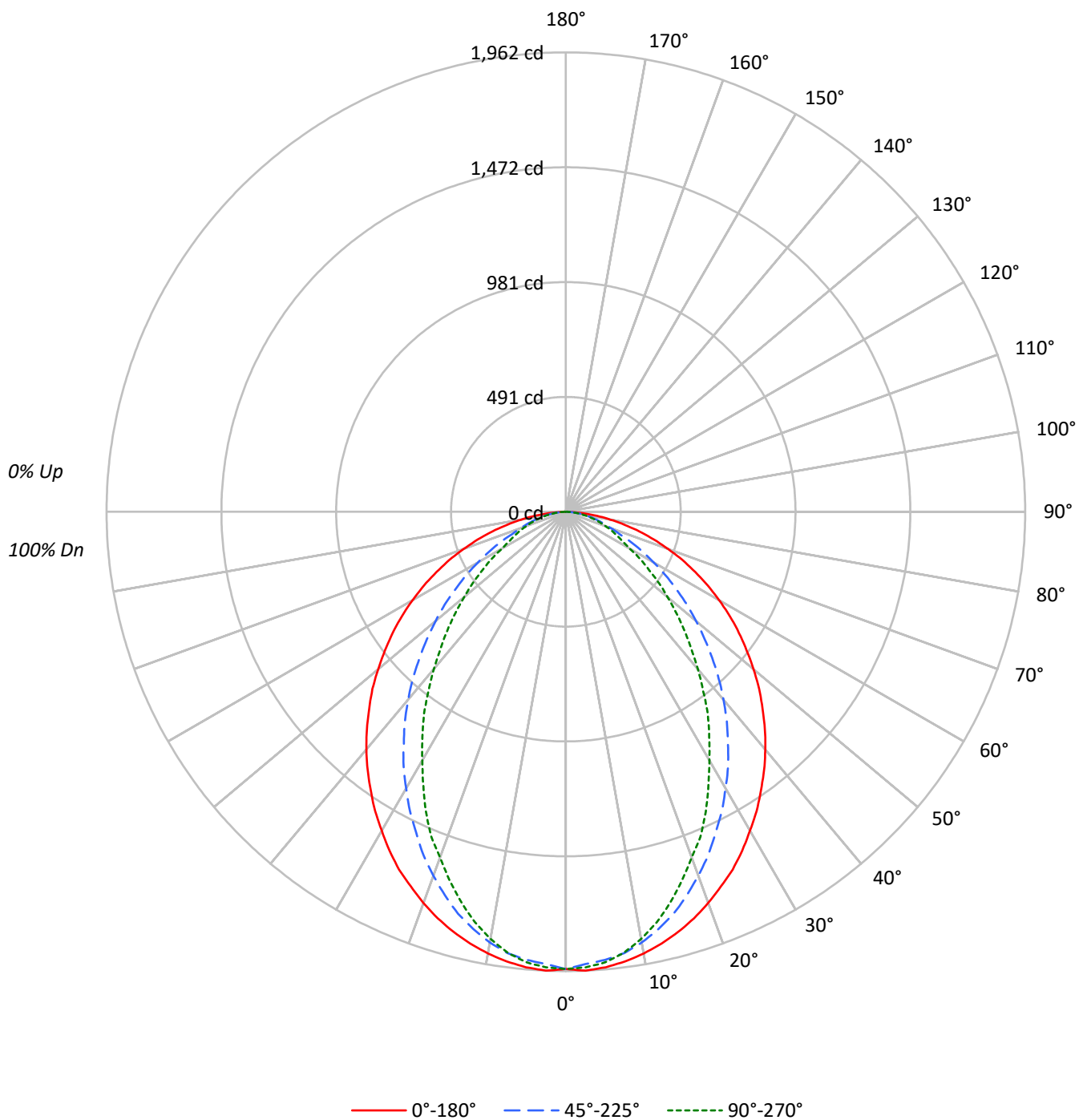
Lumens per Lamp: N/A
Luminaire Lumens: 4016.3 lumens
Efficiency: N/A
Efficacy: 81.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.28' x L: 2.84' x H: 0')
CIE Type: Direct

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	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°	2262	2262	2262
5°	2271	2234	2246
10°	2253	2197	2178
15°	2227	2132	2071
20°	2192	2039	1937
25°	2155	1934	1807
30°	2104	1825	1640
35°	2054	1707	1494
40°	2004	1585	1326
45°	1946	1448	1172
50°	1886	1309	1022
55°	1824	1160	878
60°	1752	1003	729
65°	1671	843	664
70°	1574	694	610
75°	1455	633	570
80°	1285	566	519
85°	1010	445	445

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1946 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	183.0	4.6
10°-20°	502.4	12.5
20°-30°	705.4	17.6
30°-40°	768.9	19.1
40°-50°	706.7	17.6
50°-60°	555.0	13.8
60°-70°	361.3	9.0
70°-80°	186.0	4.6
80°-90°	47.5	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°	1390.9	34.6
0°-40°	2159.8	53.8
0°-60°	3421.5	85.2
0°-90°	4016.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4016.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1953	1953	1953	1953	1953	
5°	1953	1944	1921	1937	1932	185
15°	1857	1838	1778	1744	1727	523
25°	1686	1629	1513	1440	1414	775
35°	1453	1363	1207	1096	1057	909
45°	1188	1069	884	758	716	917
55°	903	765	574	468	435	807
65°	610	466	308	248	242	604
75°	325	201	141	129	127	344
85°	76	39	34	34	34	91
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1952.8	1952.8	1952.8	1952.8	1952.8
2.5°	1961.6	1952.8	1933.4	1951.1	1947.6
5°	1952.8	1944.1	1921.0	1936.9	1931.7
7.5°	1936.9	1926.4	1901.6	1908.6	1899.7
10°	1915.7	1903.3	1868.1	1862.7	1852.1
12.5°	1889.2	1873.4	1825.6	1815.1	1795.5
15°	1857.4	1837.9	1777.9	1744.4	1726.7
17.5°	1820.3	1792.0	1717.7	1678.9	1650.5
20°	1777.9	1742.5	1654.1	1610.1	1571.1
22.5°	1732.0	1691.3	1588.7	1528.7	1502.3
25°	1686.0	1629.4	1512.8	1440.4	1413.7
27.5°	1631.3	1571.1	1442.1	1359.0	1318.4
30°	1573.0	1505.7	1364.3	1274.2	1226.4
32.5°	1516.3	1435.0	1290.2	1184.1	1139.9
35°	1452.7	1362.6	1207.1	1095.7	1056.8
37.5°	1390.9	1293.6	1129.4	1007.3	963.2
40°	1325.5	1219.5	1047.9	922.5	876.6
42.5°	1258.4	1145.2	966.7	835.9	791.8
45°	1187.7	1069.2	883.7	758.1	715.6
47.5°	1120.5	995.1	804.2	678.6	639.8
50°	1046.3	920.8	726.4	604.3	567.4
52.5°	973.7	841.1	652.1	535.5	502.0
55°	903.0	765.2	574.3	468.3	434.8
57.5°	830.7	689.3	505.5	406.5	378.2
60°	756.4	615.0	432.9	342.9	314.6
62.5°	684.0	542.6	371.1	286.3	272.3
65°	609.7	466.5	307.5	247.5	242.1
67.5°	539.0	395.9	247.5	217.4	212.1
70°	464.8	327.0	205.0	187.3	180.2
72.5°	394.2	263.3	171.4	157.3	153.8
75°	325.2	201.4	141.4	129.0	127.3
77.5°	256.3	143.1	111.4	104.2	100.6
80°	192.6	102.5	84.8	77.8	77.8
82.5°	134.3	69.0	58.3	54.7	54.7
85°	76.0	38.8	33.5	33.5	33.5
87.5°	28.4	14.1	14.1	12.4	12.4
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	14.07	15.59	14.44	15.91	16.22	10.03	11.55	10.40	11.87	12.18
	3H	15.84	17.20	16.21	17.53	17.89	11.30	12.66	11.67	12.99	13.35
	4H	16.50	17.78	16.90	18.13	18.51	11.80	13.08	12.20	13.43	13.81
	6H	16.99	18.17	17.40	18.54	18.93	12.18	13.36	12.59	13.73	14.12
	8H	17.16	18.28	17.58	18.67	19.07	12.30	13.43	12.73	13.82	14.22
	12H	17.26	18.34	17.69	18.72	19.15	12.38	13.46	12.81	13.84	14.27
4H	2H	14.18	15.46	14.57	15.80	16.18	10.73	12.01	11.13	12.36	12.73
	3H	16.11	17.17	16.52	17.57	17.97	12.17	13.23	12.58	13.63	14.03
	4H	16.86	17.81	17.29	18.23	18.67	12.77	13.73	13.20	14.14	14.58
	6H	17.45	18.28	17.91	18.72	19.18	13.26	14.09	13.71	14.53	14.99
	8H	17.66	18.44	18.13	18.89	19.35	13.42	14.20	13.88	14.64	15.11
	12H	17.82	18.51	18.30	18.99	19.46	13.54	14.23	14.02	14.71	15.18
8H	4H	16.88	17.66	17.35	18.10	18.57	13.12	13.90	13.59	14.34	14.81
	6H	17.52	18.16	18.02	18.65	19.13	13.71	14.35	14.21	14.84	15.32
	8H	17.77	18.35	18.28	18.86	19.34	13.93	14.51	14.44	15.02	15.50
	12H	17.97	18.48	18.48	18.98	19.54	14.11	14.62	14.62	15.11	15.68
12H	4H	16.87	17.56	17.35	18.04	18.51	13.17	13.86	13.65	14.34	14.81
	6H	17.50	18.08	18.01	18.59	19.08	13.77	14.35	14.29	14.86	15.35
	8H	17.78	18.29	18.29	18.79	19.35	14.05	14.56	14.56	15.05	15.61

END OF REPORT

FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE

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