

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: P930199

Luminaire Tested: DFN2DS-HX3F0-060DS950-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930199
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-HX3F0-060DS950-FLL
Description: 3 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

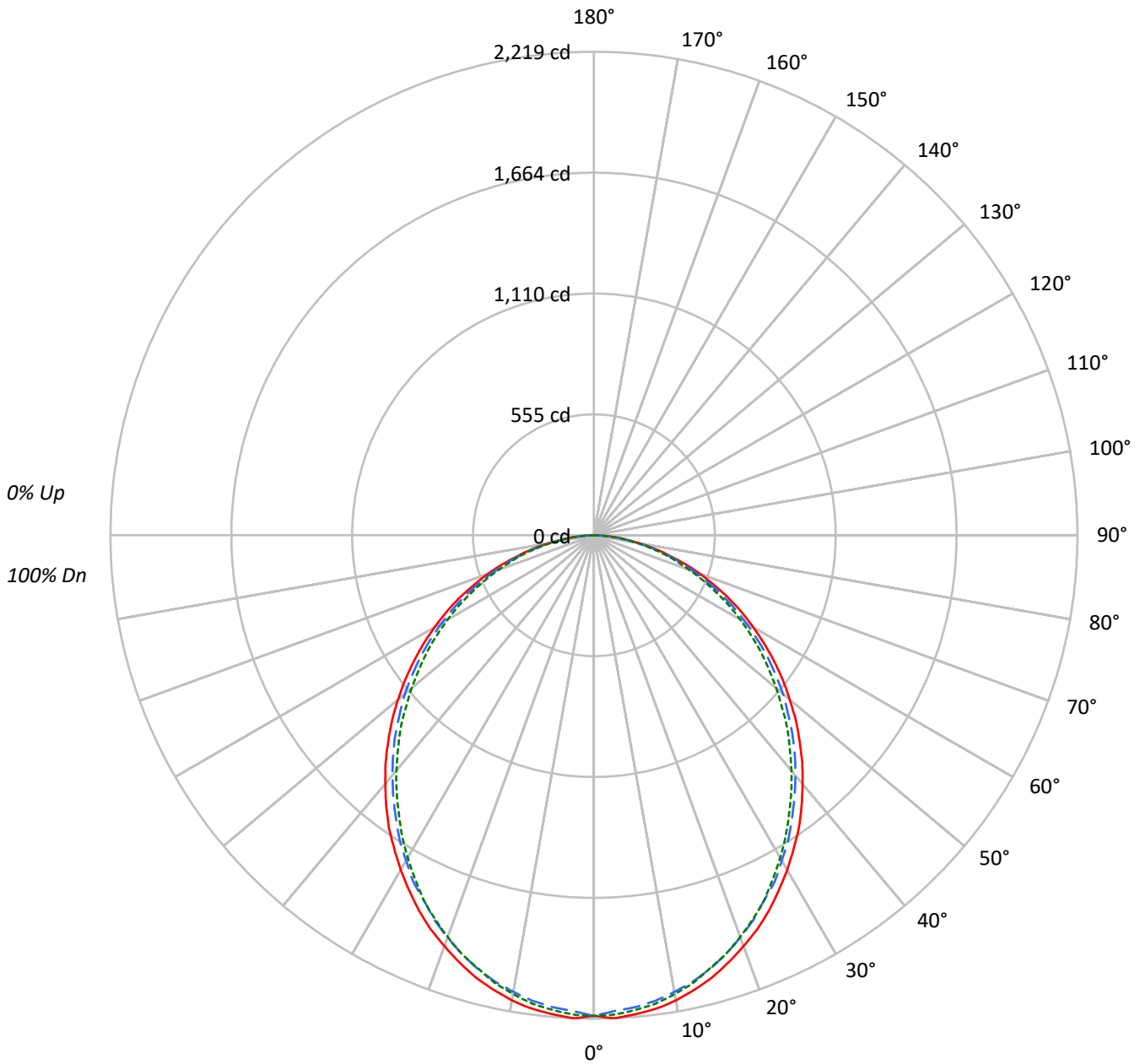
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5613.3 lumens
Efficiency: N/A
Efficacy: 91.9 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): 61.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9933
Total Harmonic Distortion (THDi): 0.066
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



— 0°-180° - - 45°-225° - - - 90°-270°



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									20									20
RC	80									70									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR	0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	100	100	100	100	96	96	96	96	96	96	84																
	1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	86	84	84	84	84	84	84	84	84	84	84	84																
	2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	73	71	71	71	71	71	71	71	71	71	71	71	71															
	3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	62	60	60	60	60	60	60	60	60	60	60	60	60															
	4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	54	51	51	51	51	51	51	51	51	51	51	51	51															
	5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	47	45	45	45	45	45	45	45	45	45	45	45	45															
	6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	41	39	39	39	39	39	39	39	39	39	39	39	39															
	7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	37	35	35	35	35	35	35	35	35	35	35	35	35															
	8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	33	31	31	31	31	31	31	31	31	31	31	31	31															
	9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	30	28	28	28	28	28	28	28	28	28	28	28	28															
	10	54	41	33	28	53	40	33	28	39	32	27	38	32	27	37	32	27	27	26	26	26	26	26	26	26	26	26	26	26	26															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2556	2556	2556
5°	2565	2528	2543
10°	2550	2503	2515
15°	2519	2470	2468
20°	2474	2422	2419
25°	2429	2362	2362
30°	2372	2307	2287
35°	2319	2241	2208
40°	2252	2175	2133
45°	2186	2109	2057
50°	2114	2042	1969
55°	2040	1962	1889
60°	1956	1868	1799
65°	1867	1774	1692
70°	1753	1660	1581
75°	1595	1528	1491
80°	1416	1372	1301
85°	1154	1100	987

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2186 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	207.7	3.7
10°-20°	584.3	10.4
20°-30°	858.6	15.3
30°-40°	997.2	17.8
40°-50°	996.0	17.7
50°-60°	868.5	15.5
60°-70°	642.0	11.4
70°-80°	363.2	6.5
80°-90°	95.9	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°	1650.5	29.4
0°-40°	2647.7	47.2
0°-60°	4512.2	80.4
0°-90°	5613.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5613.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2206	2206	2206	2206	2206	
5°	2206	2198	2174	2191	2187	209
15°	2100	2088	2060	2068	2058	592
25°	1901	1884	1848	1852	1848	875
35°	1640	1619	1585	1572	1561	1024
45°	1334	1320	1288	1264	1256	1030
55°	1010	997	972	946	936	903
65°	681	668	647	628	617	673
75°	356	352	341	329	333	380
85°	87	85	83	76	74	102
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2206.2	2206.2	2206.2	2206.2	2206.2
2.5°	2219.0	2208.5	2185.0	2206.2	2202.1
5°	2206.2	2197.9	2174.4	2191.4	2187.3
7.5°	2191.4	2178.8	2155.4	2172.5	2168.2
10°	2168.2	2153.4	2127.9	2144.8	2138.4
12.5°	2136.3	2123.6	2098.2	2108.8	2104.5
15°	2100.2	2087.6	2059.9	2068.5	2057.9
17.5°	2055.7	2043.1	2015.4	2025.9	2015.4
20°	2006.8	1994.2	1964.5	1970.8	1962.5
22.5°	1958.2	1939.0	1911.4	1911.4	1907.1
25°	1900.8	1884.0	1847.9	1851.9	1847.9
27.5°	1837.1	1822.2	1794.7	1788.5	1777.9
30°	1773.7	1756.5	1724.8	1718.5	1709.9
32.5°	1705.6	1693.1	1659.0	1646.2	1637.7
35°	1640.0	1618.8	1584.8	1571.9	1561.3
37.5°	1565.7	1546.5	1512.6	1497.6	1487.1
40°	1489.3	1472.2	1438.3	1419.4	1410.8
42.5°	1415.0	1397.9	1364.2	1342.8	1330.2
45°	1334.5	1319.6	1287.7	1264.5	1255.9
47.5°	1255.9	1241.1	1207.1	1183.7	1171.0
50°	1173.1	1162.5	1132.9	1103.1	1092.5
52.5°	1092.5	1077.7	1050.2	1026.8	1012.0
55°	1009.9	997.1	971.6	946.2	935.6
57.5°	927.1	916.6	888.9	863.4	854.8
60°	844.3	835.9	806.3	782.8	776.5
62.5°	763.7	748.8	727.6	706.5	698.0
65°	681.1	668.3	647.1	628.0	617.4
67.5°	596.2	585.4	566.5	551.7	543.1
70°	517.7	509.2	490.0	475.1	466.8
72.5°	437.1	428.6	418.0	403.1	396.8
75°	356.3	352.3	341.4	328.9	333.1
77.5°	284.3	275.8	271.4	265.2	258.8
80°	212.2	210.0	205.7	199.4	195.1
82.5°	144.3	144.3	142.2	133.7	133.7
85°	86.8	84.9	82.8	76.3	74.3
87.5°	38.3	34.0	29.7	23.4	21.2
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	14.54	16.15	14.91	16.47	16.78	14.10	15.71	14.46	16.02	16.34
	3H	16.29	17.75	16.67	18.07	18.43	15.80	17.26	16.18	17.58	17.94
	4H	16.94	18.31	17.34	18.66	19.03	16.44	17.81	16.84	18.16	18.54
	6H	17.41	18.68	17.82	19.04	19.43	16.91	18.17	17.32	18.54	18.93
	8H	17.55	18.76	17.98	19.15	19.55	17.05	18.26	17.47	18.65	19.05
	12H	17.64	18.80	18.07	19.18	19.61	17.13	18.29	17.56	18.67	19.10
4H	2H	15.10	16.47	15.50	16.82	17.20	14.75	16.12	15.15	16.47	16.84
	3H	17.08	18.22	17.49	18.62	19.02	16.67	17.82	17.08	18.22	18.62
	4H	17.85	18.89	18.29	19.30	19.74	17.43	18.47	17.86	18.88	19.32
	6H	18.45	19.36	18.91	19.80	20.25	18.02	18.92	18.47	19.36	19.82
	8H	18.64	19.49	19.10	19.93	20.40	18.20	19.05	18.66	19.49	19.96
	12H	18.77	19.53	19.25	20.01	20.48	18.32	19.08	18.80	19.56	20.03
8H	4H	18.13	18.97	18.59	19.42	19.88	17.75	18.60	18.21	19.04	19.51
	6H	18.84	19.55	19.34	20.03	20.51	18.46	19.16	18.95	19.65	20.13
	8H	19.10	19.73	19.61	20.24	20.73	18.71	19.34	19.22	19.85	20.33
	12H	19.30	19.86	19.81	20.35	20.91	18.89	19.45	19.40	19.94	20.50
12H	4H	18.15	18.91	18.63	19.39	19.86	17.79	18.55	18.27	19.02	19.49
	6H	18.89	19.52	19.40	20.03	20.51	18.52	19.15	19.03	19.66	20.14
	8H	19.20	19.76	19.71	20.25	20.81	18.82	19.38	19.33	19.87	20.43