

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: P930250

Luminaire Tested: DFN2DS-HX3F0-090DS935-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930250
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-HX3F0-090DS935-RLL
Description: 3 foot, Hexagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

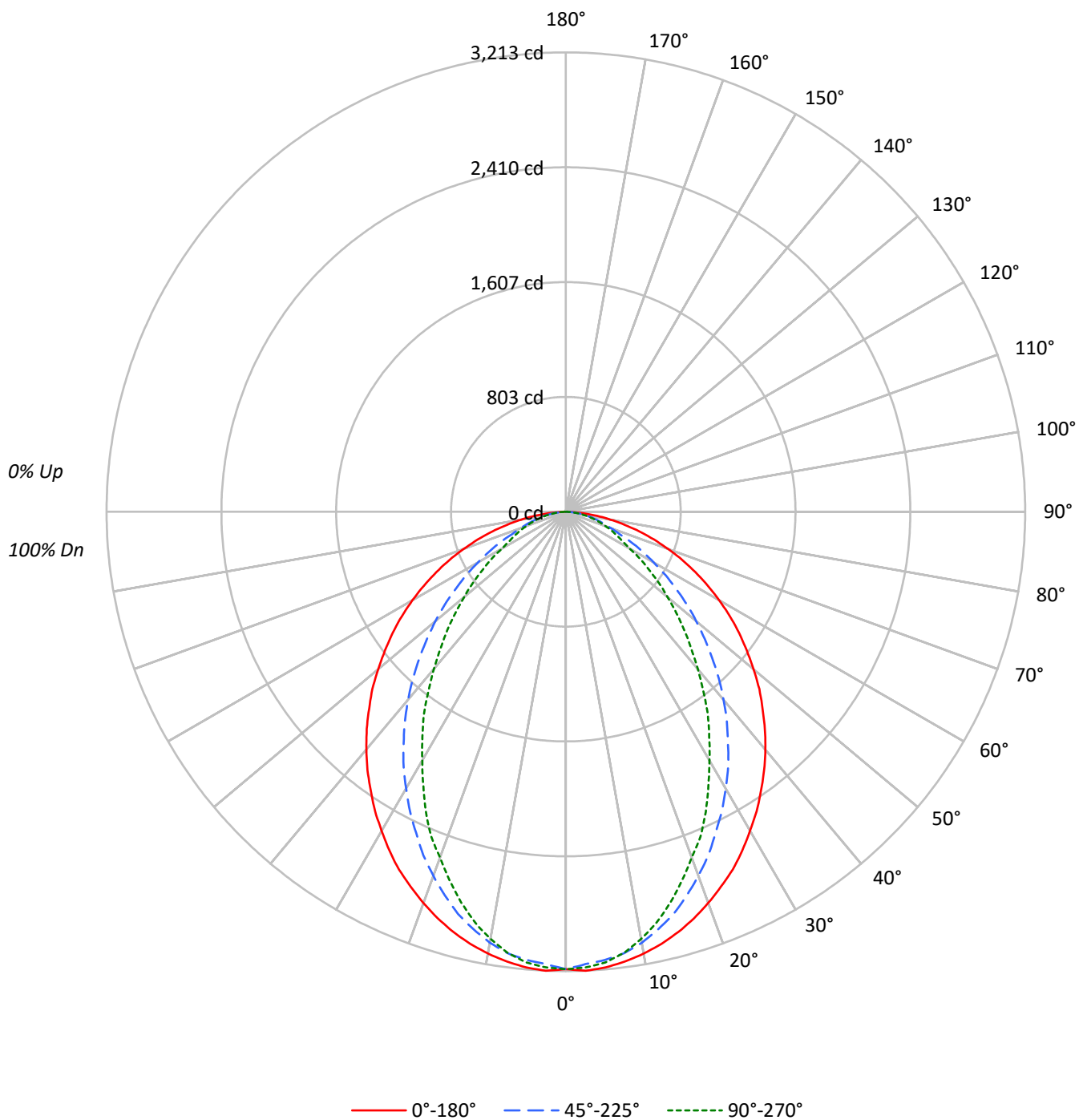
Lumens per Lamp: N/A
Luminaire Lumens: 6579.0 lumens
Efficiency: N/A
Efficacy: 67.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.28' x L: 2.84' x H: 0')
CIE Type: Direct

Input Watts (W): 97.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9968
Total Harmonic Distortion (THDi): 0.064
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			0
RW	70	50	30	10	70	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	100
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92	90	88	86
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82	79	76	74
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74	69	66	64
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66	62	57	55
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60	55	51	49
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55	50	45	43
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51	45	41	39
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41	35	31	29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3705	3705	3705
5°	3720	3659	3679
10°	3691	3599	3569
15°	3649	3493	3392
20°	3590	3340	3172
25°	3530	3167	2960
30°	3446	2989	2687
35°	3365	2796	2448
40°	3283	2596	2171
45°	3187	2371	1921
50°	3089	2144	1675
55°	2987	1900	1439
60°	2870	1643	1194
65°	2738	1381	1087
70°	2579	1137	1000
75°	2384	1037	934
80°	2104	926	851
85°	1653	731	731

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3187 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	299.8	4.6
10°-20°	823.0	12.5
20°-30°	1155.5	17.6
30°-40°	1259.6	19.1
40°-50°	1157.7	17.6
50°-60°	909.2	13.8
60°-70°	591.8	9.0
70°-80°	304.6	4.6
80°-90°	77.8	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°	2278.3	34.6
0°-40°	3537.9	53.8
0°-60°	5604.8	85.2
0°-90°	6579.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6579.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3199	3199	3199	3199	3199	
5°	3199	3184	3147	3173	3164	303
15°	3043	3011	2912	2857	2828	857
25°	2762	2669	2478	2360	2316	1270
35°	2380	2232	1977	1795	1731	1489
45°	1946	1751	1448	1242	1172	1502
55°	1479	1253	941	767	712	1322
65°	999	764	504	405	396	990
75°	533	330	232	211	209	563
85°	124	64	55	55	55	149
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3198.9	3198.9	3198.9	3198.9	3198.9
2.5°	3213.4	3198.9	3167.0	3196.2	3190.3
5°	3198.9	3184.5	3146.7	3172.8	3164.2
7.5°	3172.8	3155.6	3115.1	3126.4	3112.0
10°	3138.1	3117.8	3060.1	3051.2	3034.0
12.5°	3094.8	3068.7	2990.4	2973.2	2941.2
15°	3042.6	3010.7	2912.4	2857.4	2828.5
17.5°	2981.8	2935.4	2813.7	2750.2	2703.8
20°	2912.4	2854.3	2709.6	2637.4	2573.6
22.5°	2837.1	2770.5	2602.4	2504.1	2460.9
25°	2761.9	2669.1	2478.1	2359.5	2315.9
27.5°	2672.2	2573.6	2362.2	2226.2	2159.5
30°	2576.6	2466.4	2234.8	2087.4	2009.0
32.5°	2483.9	2350.6	2113.4	1939.6	1867.1
35°	2379.8	2232.0	1977.4	1795.0	1731.1
37.5°	2278.4	2119.0	1849.9	1650.0	1577.8
40°	2171.2	1997.7	1716.6	1511.2	1435.9
42.5°	2061.2	1876.1	1583.6	1369.3	1297.1
45°	1945.5	1751.4	1447.6	1241.8	1172.4
47.5°	1835.5	1630.0	1317.3	1111.6	1048.0
50°	1713.9	1508.4	1189.9	989.9	929.4
52.5°	1595.0	1377.9	1068.3	877.2	822.2
55°	1479.2	1253.4	940.8	767.3	712.3
57.5°	1360.7	1129.1	828.1	665.9	619.5
60°	1239.0	1007.4	709.2	561.8	515.4
62.5°	1120.5	888.9	607.8	469.0	446.0
65°	998.8	764.2	503.7	405.4	396.5
67.5°	883.0	648.4	405.4	356.0	347.4
70°	761.4	535.7	335.7	306.8	295.2
72.5°	645.6	431.2	280.7	257.7	251.9
75°	532.6	329.9	231.6	211.3	208.6
77.5°	419.9	234.4	182.4	170.8	164.9
80°	315.4	168.0	138.8	127.5	127.5
82.5°	219.9	113.0	95.5	89.7	89.7
85°	124.4	63.6	55.0	55.0	55.0
87.5°	46.4	23.0	23.0	20.3	20.3
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	15.79	17.31	16.15	17.62	17.94	11.75	13.27	12.11	13.58	13.90
	3H	17.55	18.92	17.93	19.24	19.61	13.01	14.38	13.39	14.70	15.07
	4H	18.22	19.50	18.62	19.85	20.22	13.51	14.79	13.91	15.14	15.52
	6H	18.71	19.89	19.12	20.26	20.65	13.89	15.08	14.31	15.44	15.84
	8H	18.87	20.00	19.30	20.39	20.79	14.02	15.15	14.45	15.53	15.94
	12H	18.97	20.05	19.40	20.43	20.86	14.10	15.18	14.53	15.56	15.99
4H	2H	15.89	17.17	16.29	17.52	17.90	12.44	13.72	12.84	14.07	14.45
	3H	17.82	18.89	18.23	19.29	19.69	13.88	14.95	14.30	15.35	15.75
	4H	18.57	19.53	19.00	19.94	20.38	14.48	15.44	14.92	15.86	16.29
	6H	19.16	20.00	19.62	20.44	20.90	14.97	15.80	15.43	16.25	16.71
	8H	19.38	20.16	19.84	20.60	21.07	15.13	15.91	15.60	16.36	16.82
	12H	19.53	20.23	20.01	20.70	21.18	15.25	15.95	15.73	16.42	16.90
8H	4H	18.60	19.37	19.06	19.82	20.29	14.84	15.62	15.30	16.06	16.53
	6H	19.23	19.88	19.73	20.37	20.84	15.42	16.07	15.92	16.56	17.04
	8H	19.48	20.06	20.00	20.57	21.06	15.65	16.22	16.16	16.73	17.22
	12H	19.69	20.20	20.20	20.69	21.25	15.83	16.33	16.33	16.83	17.39
12H	4H	18.58	19.28	19.06	19.75	20.22	14.88	15.58	15.36	16.05	16.53
	6H	19.21	19.79	19.73	20.30	20.79	15.49	16.07	16.00	16.58	17.06
	8H	19.50	20.01	20.01	20.50	21.07	15.76	16.27	16.27	16.76	17.33