

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: P930124

Luminaire Tested: DFN2DS-HX2F0-060DS935-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930124
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-HX2F0-060DS935-RLL
Description: 2 foot, Hexagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

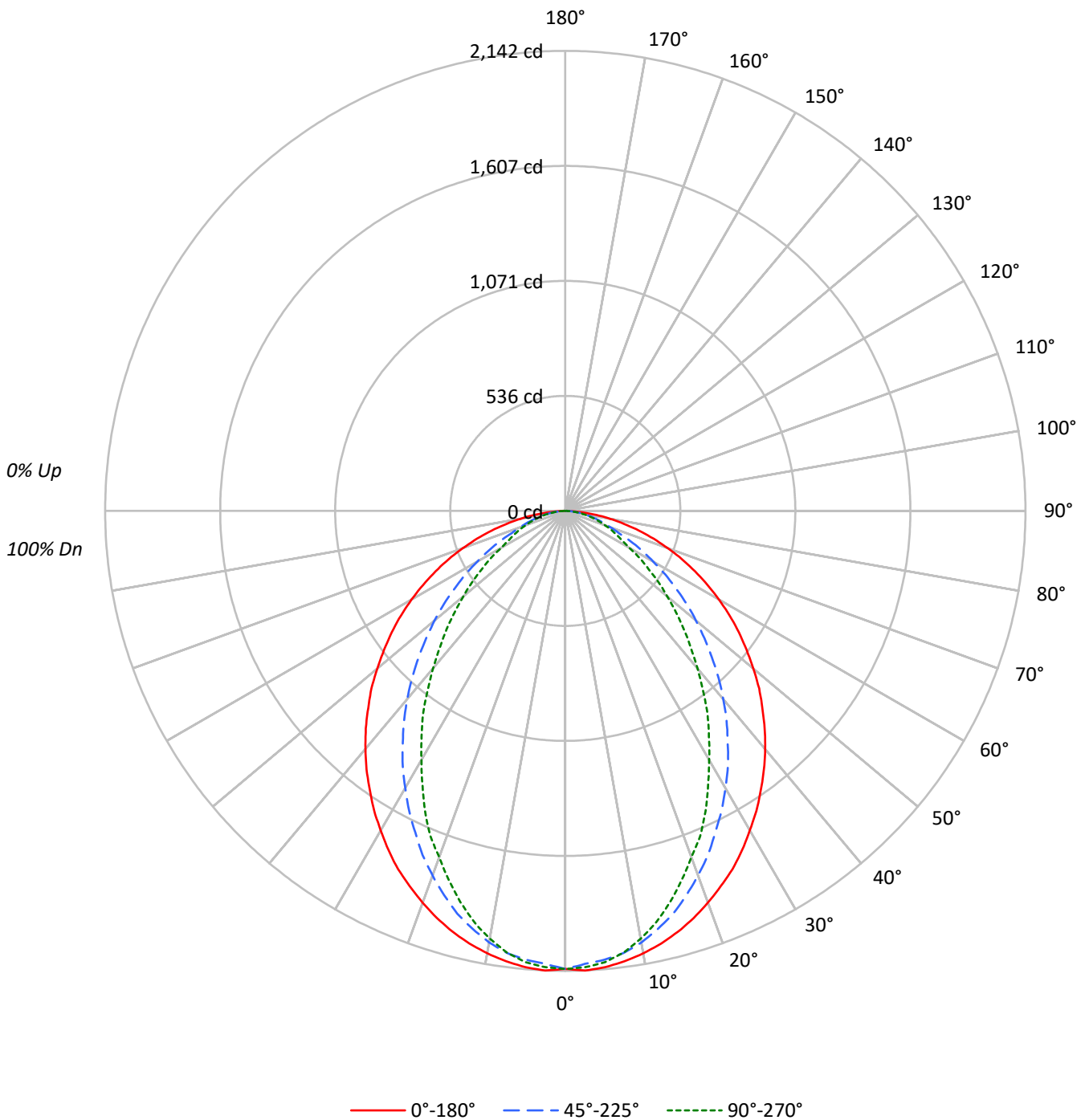
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4386.0 lumens
Efficiency: N/A
Efficacy: 71.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.3' x L: 1.99' x H: 0')
CIE Type: Direct

Input Watts (W): 61.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9971
Total Harmonic Distortion (THDi): 0.049
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	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	100	
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86	86	
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76	74	74	
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66	64	64	
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	55	55	
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49	49	
6	74	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43	43	
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39	39	
8	64	51	43	38	62	51	43	37	49	42	37	48	42	37	47	41	37	35	35	
9	60	47	39	34	59	47	39	34	46	39	34	44	38	34	44	38	34	32	32	
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29	29	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5025	5025	5025
5°	5044	4962	4989
10°	5005	4881	4839
15°	4948	4736	4599
20°	4868	4529	4302
25°	4787	4295	4014
30°	4674	4053	3644
35°	4563	3792	3319
40°	4452	3520	2944
45°	4322	3216	2604
50°	4188	2908	2271
55°	4051	2576	1950
60°	3892	2228	1619
65°	3712	1872	1474
70°	3497	1542	1356
75°	3233	1406	1266
80°	2853	1255	1153
85°	2241	989	989

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4322 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	199.9	4.6
10°-20°	548.7	12.5
20°-30°	770.3	17.6
30°-40°	839.7	19.1
40°-50°	771.8	17.6
50°-60°	606.1	13.8
60°-70°	394.5	9.0
70°-80°	203.1	4.6
80°-90°	51.8	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°	1518.9	34.6
0°-40°	2358.6	53.8
0°-60°	3736.5	85.2
0°-90°	4386.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4386.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2133	2133	2133	2133	2133	
5°	2133	2123	2098	2115	2110	202
15°	2028	2007	1942	1905	1886	572
25°	1841	1779	1652	1573	1544	847
35°	1586	1488	1318	1197	1154	993
45°	1297	1168	965	828	782	1002
55°	986	836	627	512	475	881
65°	666	510	336	270	264	660
75°	355	220	154	141	139	376
85°	83	42	37	37	37	99
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2132.6	2132.6	2132.6	2132.6	2132.6
2.5°	2142.3	2132.6	2111.3	2130.7	2126.9
5°	2132.6	2123.0	2097.8	2115.3	2109.5
7.5°	2115.3	2103.7	2076.7	2084.3	2074.7
10°	2092.0	2078.5	2040.1	2034.2	2022.6
12.5°	2063.2	2045.8	1993.6	1982.1	1960.8
15°	2028.4	2007.1	1941.5	1904.9	1885.6
17.5°	1987.9	1956.9	1875.8	1833.4	1802.6
20°	1941.5	1902.8	1806.4	1758.3	1715.7
22.5°	1891.4	1846.9	1735.0	1669.4	1640.5
25°	1841.3	1779.4	1652.1	1573.0	1544.0
27.5°	1781.5	1715.7	1574.8	1484.1	1439.7
30°	1717.8	1644.2	1489.9	1391.6	1339.4
32.5°	1655.9	1567.1	1409.0	1293.1	1244.8
35°	1586.5	1488.1	1318.3	1196.6	1154.0
37.5°	1518.9	1412.6	1233.3	1100.0	1051.9
40°	1447.5	1331.8	1144.4	1007.4	957.3
42.5°	1374.2	1250.7	1055.7	912.8	864.7
45°	1297.0	1167.5	965.1	827.8	781.6
47.5°	1223.7	1086.7	878.2	741.1	698.7
50°	1142.6	1005.6	793.3	660.0	619.6
52.5°	1063.3	918.6	712.2	584.8	548.2
55°	986.2	835.7	627.2	511.5	474.8
57.5°	907.1	752.7	552.0	443.9	413.0
60°	826.0	671.7	472.8	374.5	343.6
62.5°	747.0	592.6	405.2	312.7	297.3
65°	665.9	509.5	335.8	270.3	264.4
67.5°	588.7	432.2	270.3	237.4	231.6
70°	507.6	357.1	223.8	204.6	196.8
72.5°	430.4	287.5	187.1	171.8	167.9
75°	355.1	219.9	154.4	140.9	139.1
77.5°	279.9	156.3	121.6	113.9	110.0
80°	210.3	112.0	92.5	85.0	85.0
82.5°	146.6	75.3	63.6	59.8	59.8
85°	82.9	42.4	36.6	36.6	36.6
87.5°	31.0	15.4	15.4	13.5	13.5
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	16.84	18.37	17.21	18.68	18.99	12.80	14.33	13.17	14.64	14.95
	3H	18.61	19.97	18.99	20.30	20.66	14.07	15.43	14.45	15.76	16.12
	4H	19.28	20.56	19.67	20.90	21.28	14.57	15.85	14.97	16.20	16.58
	6H	19.76	20.95	20.18	21.31	21.71	14.95	16.14	15.36	16.50	16.89
	8H	19.93	21.06	20.36	21.45	21.85	15.08	16.20	15.50	16.59	16.99
	12H	20.03	21.11	20.46	21.49	21.92	15.16	16.24	15.59	16.62	17.05
4H	2H	16.95	18.23	17.35	18.58	18.96	13.50	14.78	13.90	15.13	15.51
	3H	18.88	19.94	19.29	20.34	20.74	14.94	16.01	15.35	16.41	16.81
	4H	19.63	20.59	20.06	21.00	21.44	15.54	16.50	15.98	16.91	17.35
	6H	20.22	21.05	20.68	21.50	21.96	16.03	16.86	16.49	17.31	17.77
	8H	20.44	21.21	20.90	21.66	22.13	16.19	16.97	16.66	17.41	17.88
	12H	20.59	21.28	21.07	21.76	22.23	16.31	17.00	16.79	17.48	17.95
8H	4H	19.65	20.43	20.12	20.88	21.34	15.90	16.67	16.36	17.12	17.59
	6H	20.29	20.93	20.79	21.43	21.90	16.48	17.13	16.98	17.62	18.09
	8H	20.54	21.12	21.06	21.63	22.12	16.70	17.28	17.22	17.79	18.28
	12H	20.75	21.26	21.26	21.75	22.31	16.88	17.39	17.39	17.89	18.45
12H	4H	19.64	20.33	20.12	20.81	21.28	15.94	16.63	16.42	17.11	17.58
	6H	20.27	20.85	20.79	21.36	21.85	16.55	17.12	17.06	17.63	18.12
	8H	20.56	21.07	21.07	21.56	22.12	16.82	17.33	17.33	17.82	18.39