

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: P930196

Luminaire Tested: DFN2DS-HX3F0-060DS935-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930196
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-HX3F0-060DS935-RLL
Description: 3 foot, Hexagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

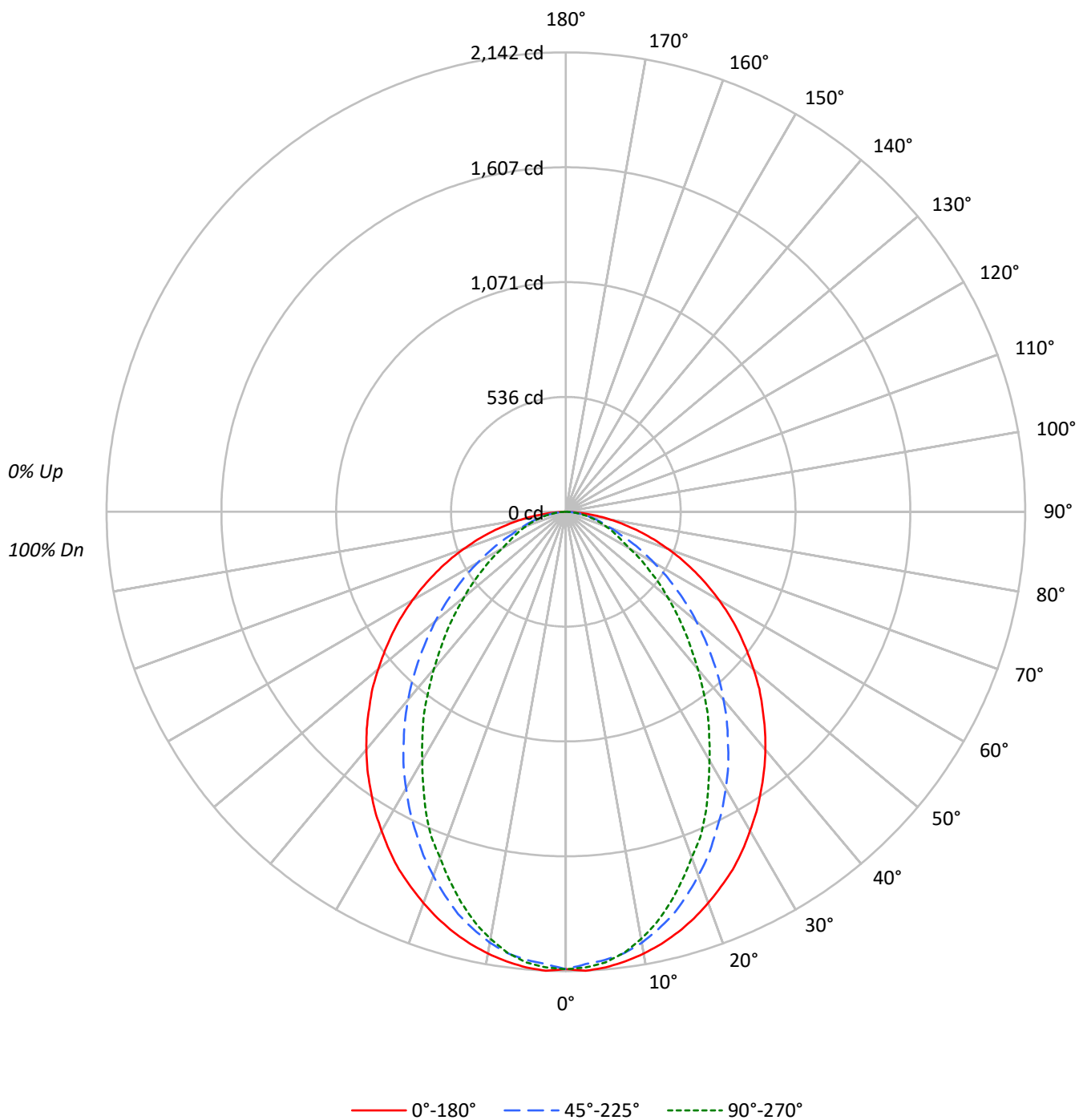
Lumens per Lamp: N/A
Luminaire Lumens: 4386.0 lumens
Efficiency: N/A
Efficacy: 71.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.28' x L: 2.84' x H: 0')
CIE Type: Direct

Input Watts (W): 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

TEST NUMBER: P930196

CATALOG NUMBER: DFN2DS-HX3F0-060DS935-RLL

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°	2470	2470	2470
5°	2480	2439	2453
10°	2461	2400	2379
15°	2432	2328	2261
20°	2393	2227	2115
25°	2353	2112	1973
30°	2298	1993	1792
35°	2243	1864	1632
40°	2189	1730	1448
45°	2125	1581	1280
50°	2059	1430	1117
55°	1992	1267	959
60°	1914	1095	796
65°	1825	920	725
70°	1719	758	667
75°	1589	691	623
80°	1403	617	567
85°	1102	486	486

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2125 cd/sqm

TEST NUMBER: P930196

CATALOG NUMBER: DFN2DS-HX3F0-060DS935-RLL

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	14.38	15.90	14.74	16.21	16.53	10.34	11.86	10.70	12.17	12.49
	3H	16.14	17.51	16.52	17.83	18.20	11.60	12.97	11.98	13.30	13.66
	4H	16.81	18.09	17.21	18.44	18.82	12.10	13.39	12.50	13.73	14.11
	6H	17.30	18.48	17.71	18.85	19.24	12.49	13.67	12.90	14.04	14.43
	8H	17.46	18.59	17.89	18.98	19.38	12.61	13.74	13.04	14.13	14.53
	12H	17.57	18.64	18.00	19.03	19.46	12.69	13.77	13.12	14.15	14.58
4H	2H	14.48	15.76	14.88	16.11	16.49	11.03	12.31	11.43	12.66	13.04
	3H	16.41	17.48	16.82	17.88	18.28	12.48	13.54	12.89	13.94	14.34
	4H	17.16	18.12	17.60	18.54	18.97	13.08	14.03	13.51	14.45	14.89
	6H	17.76	18.59	18.21	19.03	19.49	13.56	14.40	14.02	14.84	15.30
	8H	17.97	18.75	18.43	19.19	19.66	13.73	14.50	14.19	14.95	15.41
	12H	18.12	18.82	18.61	19.30	19.77	13.84	14.54	14.33	15.02	15.49
8H	4H	17.19	17.96	17.65	18.41	18.88	13.43	14.21	13.89	14.65	15.12
	6H	17.83	18.47	18.32	18.96	19.44	14.02	14.66	14.51	15.15	15.63
	8H	18.08	18.65	18.59	19.16	19.65	14.24	14.81	14.75	15.32	15.81
	12H	18.28	18.79	18.79	19.28	19.85	14.42	14.93	14.93	15.42	15.98
12H	4H	17.17	17.87	17.65	18.34	18.82	13.47	14.17	13.95	14.65	15.12
	6H	17.81	18.38	18.32	18.89	19.38	14.08	14.66	14.59	15.17	15.65
	8H	18.09	18.60	18.60	19.09	19.66	14.35	14.86	14.86	15.35	15.92