

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: P930104

Luminaire Tested: DFN2DS-HX2F0-050DS930-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930104
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-HX2F0-050DS930-RLL
Description: 2 foot, Hexagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

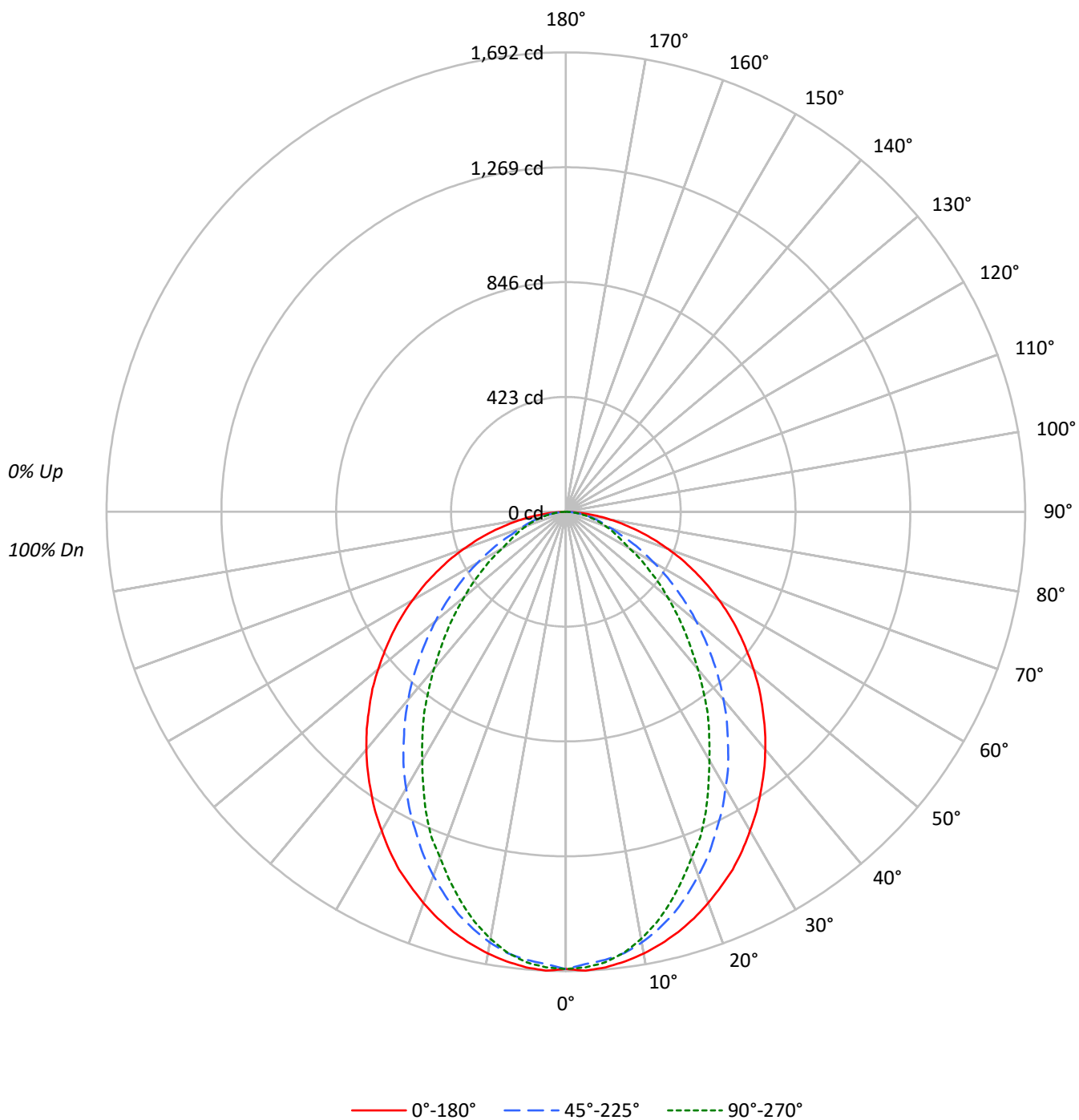
Lumens per Lamp: N/A
Luminaire Lumens: 3463.8 lumens
Efficiency: N/A
Efficacy: 69.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.3' x L: 1.99' x H: 0')
CIE Type: Direct

Input Watts (W): 49.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9789
Total Harmonic Distortion (THDi): 0.074
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°	3968	3968	3968
5°	3983	3918	3940
10°	3953	3855	3822
15°	3907	3740	3633
20°	3845	3577	3397
25°	3780	3392	3170
30°	3691	3201	2878
35°	3604	2995	2621
40°	3516	2780	2325
45°	3413	2539	2057
50°	3308	2296	1794
55°	3199	2035	1540
60°	3074	1760	1278
65°	2931	1479	1164
70°	2762	1218	1071
75°	2553	1110	1000
80°	2254	992	910
85°	1771	781	781

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3413 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.8	4.6
10°-20°	433.3	12.5
20°-30°	608.4	17.6
30°-40°	663.2	19.1
40°-50°	609.5	17.6
50°-60°	478.7	13.8
60°-70°	311.6	9.0
70°-80°	160.4	4.6
80°-90°	40.9	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°	1199.5	34.6
0°-40°	1862.7	53.8
0°-60°	2950.9	85.2
0°-90°	3463.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3463.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1684	1684	1684	1684	1684	
5°	1684	1677	1657	1670	1666	160
15°	1602	1585	1533	1504	1489	451
25°	1454	1405	1305	1242	1219	669
35°	1253	1175	1041	945	911	784
45°	1024	922	762	654	617	791
55°	779	660	495	404	375	696
65°	526	402	265	213	209	521
75°	280	174	122	111	110	297
85°	66	34	29	29	29	79
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1684.2	1684.2	1684.2	1684.2	1684.2
2.5°	1691.8	1684.2	1667.4	1682.7	1679.6
5°	1684.2	1676.6	1656.7	1670.4	1665.9
7.5°	1670.4	1661.4	1640.0	1646.1	1638.4
10°	1652.2	1641.5	1611.1	1606.4	1597.3
12.5°	1629.3	1615.7	1574.4	1565.4	1548.5
15°	1601.9	1585.1	1533.3	1504.4	1489.2
17.5°	1569.9	1545.5	1481.4	1447.9	1423.5
20°	1533.3	1502.8	1426.6	1388.6	1354.9
22.5°	1493.7	1458.6	1370.2	1318.4	1295.6
25°	1454.0	1405.2	1304.7	1242.2	1219.2
27.5°	1406.9	1354.9	1243.7	1172.1	1137.0
30°	1356.6	1298.5	1176.6	1098.9	1057.7
32.5°	1307.7	1237.6	1112.7	1021.2	983.1
35°	1252.9	1175.1	1041.1	945.0	911.4
37.5°	1199.5	1115.7	974.0	868.7	830.7
40°	1143.1	1051.8	903.8	795.6	756.0
42.5°	1085.3	987.7	833.7	720.9	682.9
45°	1024.3	922.1	762.1	653.8	617.2
47.5°	966.3	858.2	693.6	585.3	551.8
50°	902.4	794.1	626.5	521.2	489.3
52.5°	839.8	725.4	562.4	461.9	432.9
55°	778.8	659.9	495.3	403.9	375.0
57.5°	716.4	594.5	435.9	350.6	326.2
60°	652.3	530.4	373.4	295.8	271.3
62.5°	589.9	468.0	320.1	246.9	234.8
65°	525.8	402.4	265.2	213.4	208.8
67.5°	464.9	341.4	213.4	187.4	182.9
70°	400.9	282.0	176.8	161.5	155.4
72.5°	339.9	227.1	147.8	135.7	132.6
75°	280.4	173.7	121.9	111.2	109.8
77.5°	221.0	123.4	96.1	89.9	86.8
80°	166.1	88.4	73.1	67.1	67.1
82.5°	115.8	59.5	50.3	47.2	47.2
85°	65.5	33.5	28.9	28.9	28.9
87.5°	24.4	12.1	12.1	10.7	10.7
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	16.02	17.55	16.39	17.86	18.17	11.98	13.51	12.35	13.82	14.13
	3H	17.79	19.15	18.17	19.48	19.84	13.25	14.61	13.63	14.94	15.30
	4H	18.46	19.74	18.86	20.08	20.46	13.75	15.03	14.15	15.38	15.76
	6H	18.94	20.13	19.36	20.49	20.89	14.13	15.31	14.54	15.68	16.07
	8H	19.11	20.24	19.54	20.63	21.03	14.26	15.38	14.68	15.77	16.17
	12H	19.21	20.29	19.64	20.67	21.10	14.34	15.42	14.77	15.80	16.23
4H	2H	16.13	17.41	16.53	17.76	18.14	12.68	13.96	13.08	14.31	14.69
	3H	18.06	19.12	18.47	19.52	19.92	14.12	15.19	14.53	15.59	15.99
	4H	18.81	19.77	19.24	20.18	20.62	14.72	15.68	15.15	16.09	16.53
	6H	19.40	20.23	19.86	20.68	21.14	15.21	16.04	15.67	16.48	16.94
	8H	19.62	20.39	20.08	20.84	21.31	15.37	16.15	15.84	16.59	17.06
	12H	19.77	20.46	20.25	20.94	21.41	15.49	16.18	15.97	16.66	17.13
8H	4H	18.83	19.61	19.30	20.06	20.52	15.08	15.85	15.54	16.30	16.76
	6H	19.47	20.11	19.97	20.61	21.08	15.66	16.30	16.16	16.80	17.27
	8H	19.72	20.30	20.24	20.81	21.30	15.88	16.46	16.40	16.97	17.46
	12H	19.93	20.44	20.44	20.93	21.49	16.06	16.57	16.57	17.06	17.63
12H	4H	18.82	19.51	19.30	19.99	20.46	15.12	15.81	15.60	16.29	16.76
	6H	19.45	20.03	19.97	20.54	21.03	15.73	16.30	16.24	16.81	17.30
	8H	19.74	20.25	20.25	20.74	21.30	16.00	16.51	16.51	17.00	17.57