

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: P930540

Luminaire Tested: DFN2DS-PN3F0-040DS940-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930540
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-PN3F0-040DS940-RLL
Description: 3 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

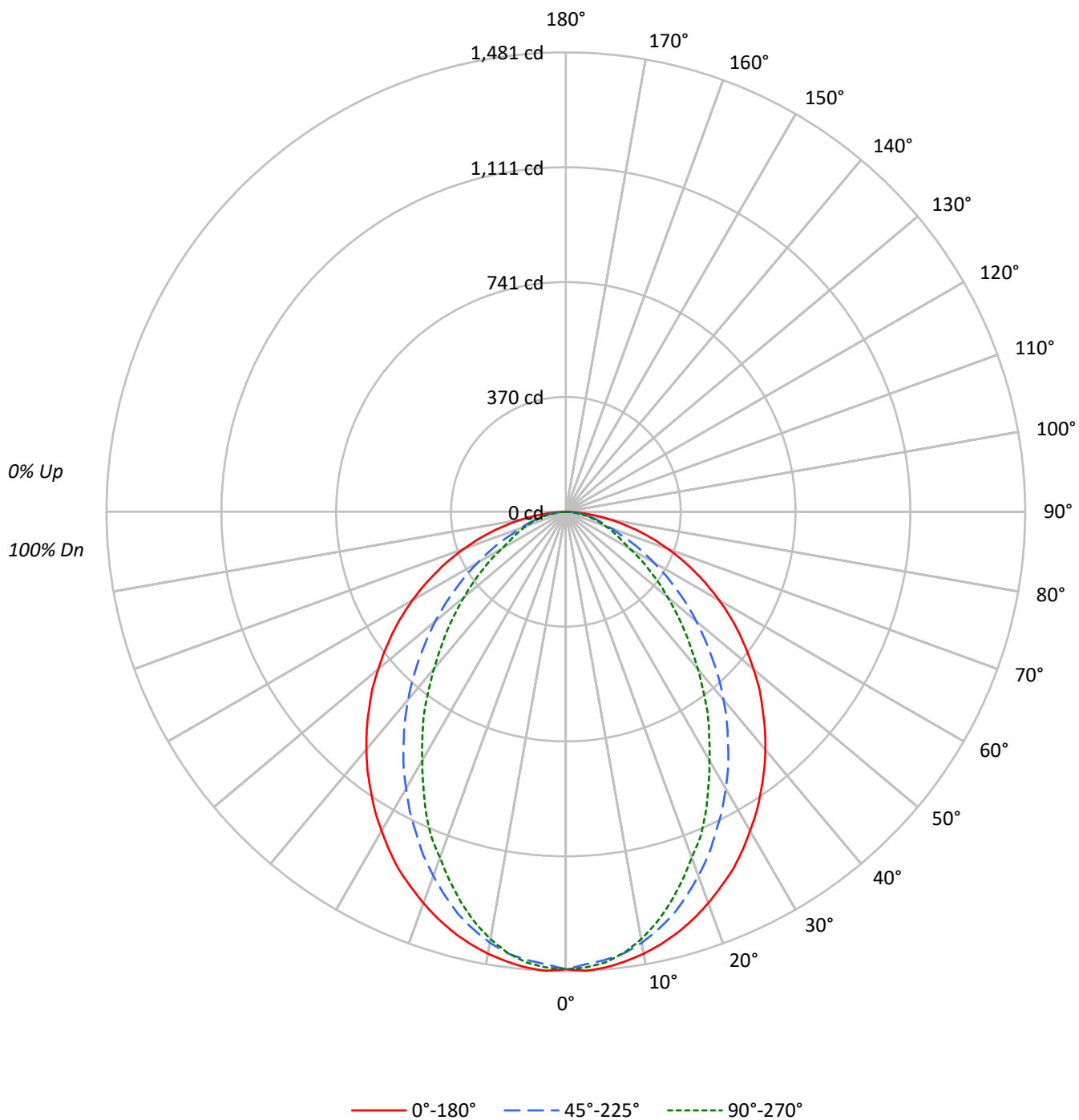
Lumens per Lamp: N/A
Luminaire Lumens: 3032.8 lumens
Efficiency: N/A
Efficacy: 78.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.11' x L: 2.96' x H: 0')
CIE Type: Direct

Input Watts (W): 38.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9972
Total Harmonic Distortion (THDi): 0.128
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°	1724	1724	1724
5°	1730	1702	1712
10°	1717	1674	1660
15°	1697	1625	1578
20°	1670	1554	1476
25°	1642	1473	1377
30°	1603	1391	1250
35°	1566	1301	1139
40°	1527	1208	1010
45°	1483	1103	894
50°	1437	998	779
55°	1390	884	669
60°	1335	764	556
65°	1274	642	506
70°	1200	529	465
75°	1109	482	434
80°	979	431	396
85°	770	339	339

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1483 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.2	4.6
10°-20°	379.4	12.5
20°-30°	532.7	17.6
30°-40°	580.6	19.1
40°-50°	533.7	17.6
50°-60°	419.1	13.8
60°-70°	272.8	9.0
70°-80°	140.4	4.6
80°-90°	35.9	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°	1050.3	34.6
0°-40°	1630.9	53.8
0°-60°	2583.7	85.2
0°-90°	3032.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3032.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1475	1475	1475	1475	1475	
5°	1475	1468	1451	1463	1459	140
15°	1403	1388	1342	1317	1304	395
25°	1273	1230	1142	1088	1068	586
35°	1097	1029	912	827	798	687
45°	897	807	667	572	540	693
55°	682	578	434	354	328	609
65°	460	352	232	187	183	457
75°	246	152	107	97	96	260
85°	57	29	25	25	25	69
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1474.7	1474.7	1474.7	1474.7	1474.7
2.5°	1481.3	1474.7	1459.9	1473.4	1470.6
5°	1474.7	1468.0	1450.6	1462.6	1458.7
7.5°	1462.6	1454.7	1436.0	1441.2	1434.6
10°	1446.6	1437.3	1410.6	1406.5	1398.7
12.5°	1426.7	1414.6	1378.5	1370.6	1355.8
15°	1402.6	1387.9	1342.5	1317.2	1303.9
17.5°	1374.6	1353.2	1297.1	1267.8	1246.4
20°	1342.5	1315.8	1249.1	1215.8	1186.4
22.5°	1307.9	1277.2	1199.7	1154.3	1134.4
25°	1273.2	1230.4	1142.3	1087.7	1067.5
27.5°	1231.9	1186.4	1089.0	1026.2	995.5
30°	1187.8	1136.9	1030.2	962.2	926.2
32.5°	1145.1	1083.6	974.2	894.1	860.7
35°	1097.1	1028.9	911.5	827.4	798.0
37.5°	1050.3	976.8	852.8	760.6	727.3
40°	1000.9	920.9	791.4	696.7	662.0
42.5°	950.2	864.8	730.0	631.2	597.9
45°	896.8	807.3	667.3	572.5	540.5
47.5°	846.2	751.4	607.3	512.5	483.1
50°	790.0	695.3	548.5	456.3	428.4
52.5°	735.3	635.2	492.5	404.3	379.0
55°	681.9	577.8	433.7	353.7	328.3
57.5°	627.3	520.5	381.7	306.9	285.6
60°	571.1	464.4	326.9	258.9	237.6
62.5°	516.6	409.8	280.2	216.2	205.6
65°	460.5	352.3	232.2	186.9	182.8
67.5°	407.1	298.9	186.9	164.1	160.1
70°	351.0	246.9	154.8	141.5	136.0
72.5°	297.7	198.8	129.4	118.8	116.1
75°	245.5	152.1	106.8	97.4	96.2
77.5°	193.6	108.0	84.1	78.8	76.0
80°	145.4	77.4	64.0	58.8	58.8
82.5°	101.4	52.1	44.1	41.3	41.3
85°	57.4	29.3	25.3	25.3	25.3
87.5°	21.4	10.6	10.6	9.4	9.4
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	13.13	14.65	13.49	14.96	15.28	9.09	10.61	9.45	10.92	11.24
	3H	14.89	16.26	15.27	16.59	16.95	10.35	11.72	10.73	12.04	12.41
	4H	15.56	16.84	15.96	17.19	17.57	10.85	12.13	11.25	12.48	12.86
	6H	16.05	17.23	16.46	17.60	17.99	11.23	12.42	11.65	12.78	13.18
	8H	16.21	17.34	16.64	17.73	18.13	11.36	12.49	11.79	12.88	13.28
	12H	16.32	17.39	16.75	17.78	18.21	11.44	12.52	11.87	12.90	13.33
4H	2H	13.23	14.51	13.63	14.86	15.24	9.78	11.06	10.18	11.41	11.79
	3H	15.16	16.23	15.57	16.63	17.03	11.23	12.29	11.64	12.69	13.09
	4H	15.91	16.87	16.35	17.29	17.72	11.82	12.78	12.26	13.20	13.64
	6H	16.51	17.34	16.96	17.78	18.24	12.31	13.15	12.77	13.59	14.05
	8H	16.72	17.50	17.18	17.94	18.41	12.48	13.25	12.94	13.70	14.16
	12H	16.87	17.57	17.36	18.05	18.52	12.59	13.29	13.07	13.77	14.24
8H	4H	15.94	16.72	16.40	17.16	17.63	12.18	12.96	12.64	13.40	13.87
	6H	16.58	17.22	17.07	17.71	18.19	12.77	13.41	13.26	13.90	14.38
	8H	16.83	17.40	17.34	17.91	18.40	12.99	13.56	13.50	14.07	14.56
	12H	17.03	17.54	17.54	18.03	18.60	13.17	13.68	13.68	14.17	14.73
12H	4H	15.92	16.62	16.40	17.10	17.57	12.22	12.92	12.70	13.40	13.87
	6H	16.56	17.13	17.07	17.64	18.13	12.83	13.41	13.34	13.92	14.40
	8H	16.84	17.35	17.35	17.84	18.41	13.10	13.61	13.61	14.10	14.67