

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: P930530

Luminaire Tested: DFN2DS-PN3F0-040DS840-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930530
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-PN3F0-040DS840-RLL
Description: 3 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

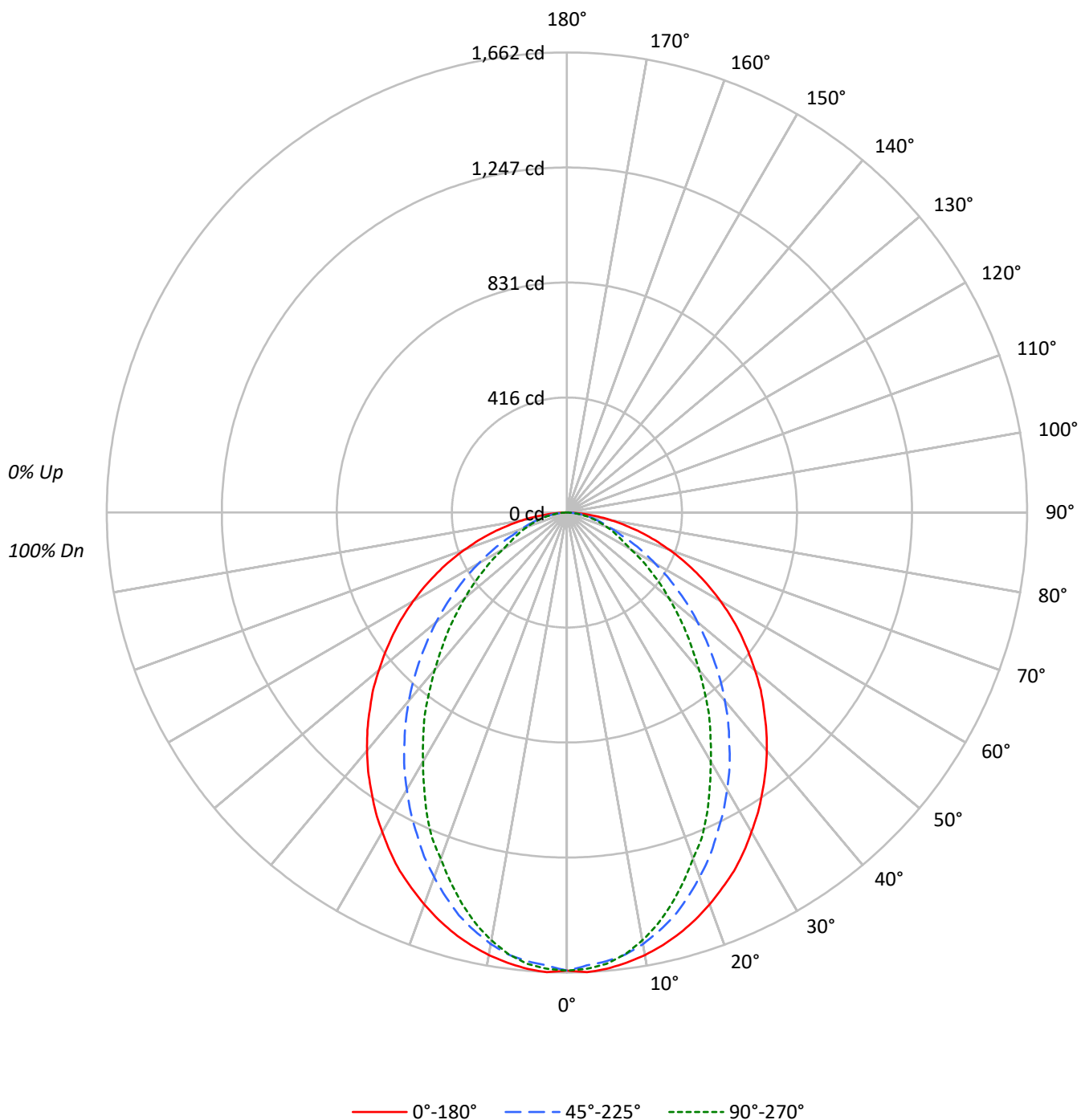
Lumens per Lamp: N/A
Luminaire Lumens: 3403.4 lumens
Efficiency: N/A
Efficacy: 87.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.11' x L: 2.96' x H: 0')
CIE Type: Direct

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°	1935	1935	1935
5°	1942	1910	1921
10°	1927	1879	1863
15°	1905	1823	1771
20°	1874	1744	1656
25°	1843	1653	1545
30°	1799	1561	1403
35°	1757	1460	1278
40°	1714	1355	1134
45°	1664	1238	1003
50°	1612	1119	874
55°	1560	992	751
60°	1498	858	624
65°	1429	721	567
70°	1346	594	522
75°	1244	541	487
80°	1099	483	444
85°	864	381	381

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1664 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.1	4.6
10°-20°	425.8	12.5
20°-30°	597.8	17.6
30°-40°	651.6	19.1
40°-50°	598.9	17.6
50°-60°	470.3	13.8
60°-70°	306.1	9.0
70°-80°	157.6	4.6
80°-90°	40.2	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°	1178.6	34.6
0°-40°	1830.2	53.8
0°-60°	2899.4	85.2
0°-90°	3403.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3403.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1655	1655	1655	1655	1655	
5°	1655	1647	1628	1641	1637	157
15°	1574	1558	1507	1478	1463	444
25°	1429	1381	1282	1221	1198	657
35°	1231	1155	1023	928	896	771
45°	1006	906	749	642	606	777
55°	765	648	487	397	368	684
65°	517	395	261	210	205	512
75°	276	171	120	109	108	291
85°	64	33	28	28	28	77
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1654.9	1654.9	1654.9	1654.9	1654.9
2.5°	1662.4	1654.9	1638.3	1653.5	1650.3
5°	1654.9	1647.3	1627.8	1641.3	1636.9
7.5°	1641.3	1632.4	1611.5	1617.3	1609.9
10°	1623.4	1612.9	1583.0	1578.4	1569.6
12.5°	1601.0	1587.5	1546.9	1538.0	1521.5
15°	1574.0	1557.5	1506.6	1478.2	1463.3
17.5°	1542.5	1518.5	1455.6	1422.7	1398.7
20°	1506.6	1476.6	1401.7	1364.4	1331.3
22.5°	1467.7	1433.2	1346.2	1295.4	1273.1
25°	1428.7	1380.8	1281.9	1220.6	1198.0
27.5°	1382.4	1331.3	1222.0	1151.7	1117.1
30°	1332.9	1275.9	1156.1	1079.8	1039.3
32.5°	1285.0	1216.0	1093.3	1003.4	965.9
35°	1231.1	1154.7	1022.9	928.5	895.5
37.5°	1178.7	1096.2	957.0	853.6	816.2
40°	1123.2	1033.4	888.1	781.8	742.8
42.5°	1066.3	970.5	819.2	708.3	671.0
45°	1006.4	906.0	748.8	642.4	606.5
47.5°	949.5	843.2	681.5	575.1	542.1
50°	886.6	780.3	615.5	512.1	480.8
52.5°	825.1	712.8	552.7	453.8	425.3
55°	765.3	648.4	486.7	396.9	368.5
57.5°	703.9	584.1	428.3	344.4	320.5
60°	640.9	521.1	366.9	290.6	266.7
62.5°	579.7	459.9	314.4	242.6	230.7
65°	516.7	395.3	260.6	209.7	205.1
67.5°	456.9	335.4	209.7	184.2	179.7
70°	393.9	277.1	173.7	158.8	152.7
72.5°	334.0	223.1	145.2	133.3	130.3
75°	275.5	170.7	119.8	109.3	107.9
77.5°	217.2	121.2	94.4	88.4	85.3
80°	163.2	86.9	71.8	66.0	66.0
82.5°	113.8	58.5	49.4	46.3	46.3
85°	64.4	32.9	28.4	28.4	28.4
87.5°	24.0	11.9	11.9	10.5	10.5
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	13.53	15.05	13.89	15.36	15.68	9.49	11.01	9.85	11.32	11.64
	3H	15.29	16.66	15.67	16.99	17.35	10.75	12.12	11.13	12.45	12.81
	4H	15.96	17.24	16.36	17.59	17.97	11.25	12.54	11.65	12.88	13.26
	6H	16.45	17.63	16.86	18.00	18.39	11.64	12.82	12.05	13.19	13.58
	8H	16.61	17.74	17.04	18.13	18.53	11.76	12.89	12.19	13.28	13.68
	12H	16.72	17.79	17.15	18.18	18.61	11.84	12.92	12.27	13.30	13.73
4H	2H	13.63	14.91	14.03	15.26	15.64	10.18	11.46	10.58	11.81	12.19
	3H	15.56	16.63	15.98	17.03	17.43	11.63	12.69	12.04	13.09	13.49
	4H	16.31	17.27	16.75	17.69	18.13	12.23	13.18	12.66	13.60	14.04
	6H	16.91	17.74	17.36	18.18	18.64	12.71	13.55	13.17	13.99	14.45
	8H	17.12	17.90	17.58	18.34	18.81	12.88	13.65	13.34	14.10	14.56
	12H	17.27	17.97	17.76	18.45	18.92	12.99	13.69	13.47	14.17	14.64
8H	4H	16.34	17.12	16.80	17.56	18.03	12.58	13.36	13.04	13.80	14.27
	6H	16.98	17.62	17.47	18.11	18.59	13.17	13.81	13.66	14.30	14.78
	8H	17.23	17.80	17.74	18.31	18.80	13.39	13.96	13.90	14.47	14.96
	12H	17.43	17.94	17.94	18.43	19.00	13.57	14.08	14.08	14.57	15.13
12H	4H	16.32	17.02	16.81	17.50	17.97	12.62	13.32	13.11	13.80	14.27
	6H	16.96	17.53	17.47	18.04	18.53	13.23	13.81	13.74	14.32	14.81
	8H	17.24	17.75	17.75	18.24	18.81	13.50	14.01	14.01	14.50	15.07