

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: P929877

Luminaire Tested: DFN2DS-4P3F0-040DS830-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929877
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-4P3F0-040DS830-FLL
Description: 3 foot, 90deg - 4way Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

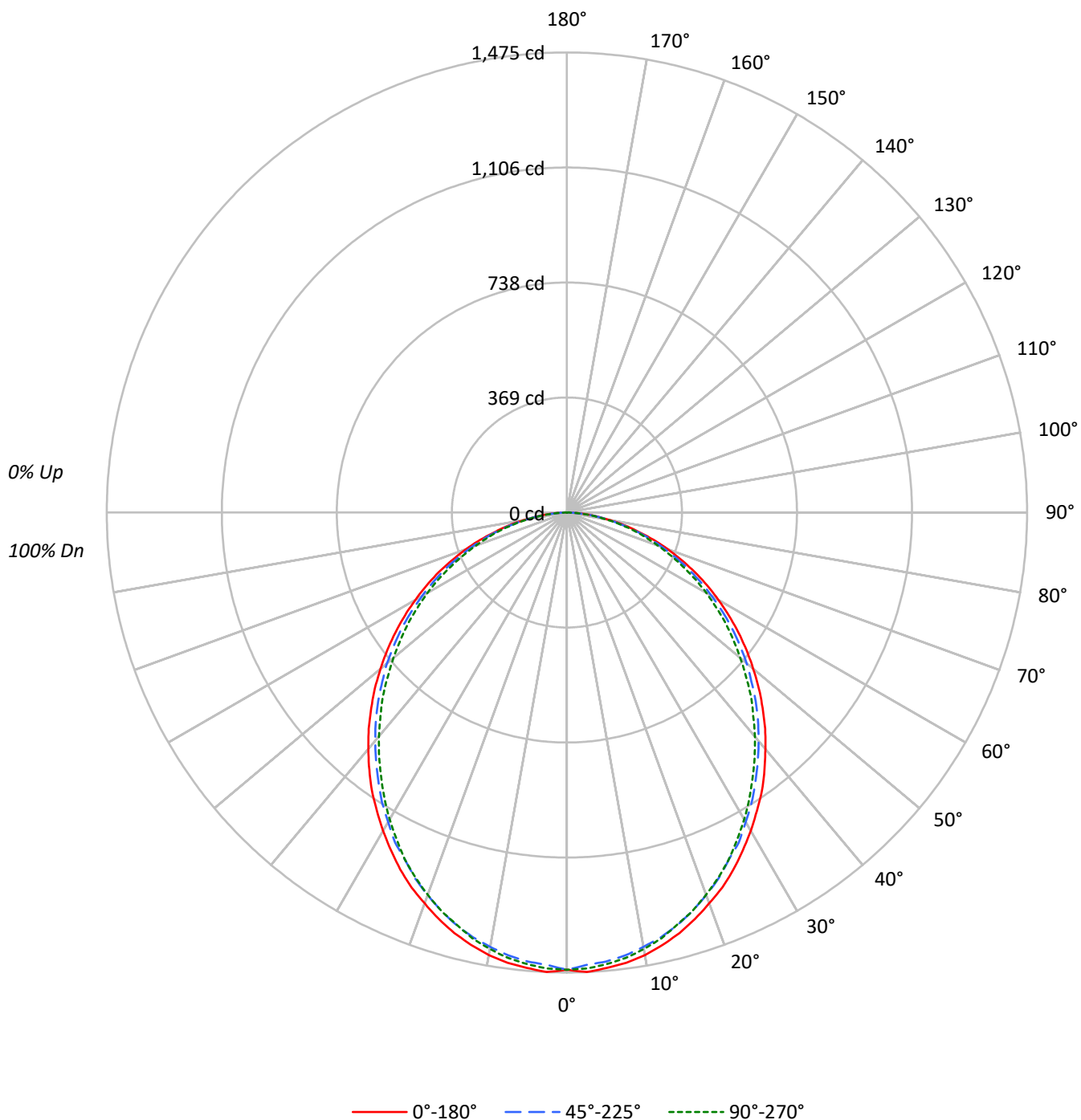
Lumens per Lamp: N/A
Luminaire Lumens: 3730.3 lumens
Efficiency: N/A
Efficacy: 91.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.07' x L: 3.07' x H: 0')
CIE Type: Direct

Input Watts (W): 40.6
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	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1671	1671	1671
5°	1677	1653	1663
10°	1667	1636	1644
15°	1647	1615	1613
20°	1617	1583	1582
25°	1588	1544	1544
30°	1551	1508	1495
35°	1516	1465	1443
40°	1472	1422	1395
45°	1429	1379	1345
50°	1382	1335	1287
55°	1334	1283	1235
60°	1279	1221	1176
65°	1220	1160	1106
70°	1146	1085	1034
75°	1043	999	975
80°	925	897	851
85°	754	719	646

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1429 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.0	3.7
10°-20°	388.3	10.4
20°-30°	570.6	15.3
30°-40°	662.7	17.8
40°-50°	661.9	17.7
50°-60°	577.1	15.5
60°-70°	426.6	11.4
70°-80°	241.4	6.5
80°-90°	63.7	1.7
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°	1096.8	29.4
0°-40°	1759.5	47.2
0°-60°	2998.6	80.4
0°-90°	3730.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3730.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1466	1466	1466	1466	1466	
5°	1466	1461	1445	1456	1454	139
15°	1396	1387	1369	1375	1368	393
25°	1263	1252	1228	1231	1228	581
35°	1090	1076	1053	1045	1038	681
45°	887	877	856	840	835	684
55°	671	663	646	629	622	600
65°	453	444	430	417	410	447
75°	237	234	227	218	221	253
85°	58	56	55	51	49	68
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1466.1	1466.1	1466.1	1466.1	1466.1
2.5°	1474.7	1467.6	1452.1	1466.1	1463.5
5°	1466.1	1460.6	1445.0	1456.2	1453.6
7.5°	1456.2	1447.9	1432.3	1443.7	1440.9
10°	1440.9	1431.0	1414.1	1425.3	1421.1
12.5°	1419.6	1411.2	1394.3	1401.4	1398.5
15°	1395.7	1387.3	1368.9	1374.6	1367.6
17.5°	1366.1	1357.7	1339.3	1346.3	1339.3
20°	1333.6	1325.2	1305.5	1309.7	1304.2
22.5°	1301.3	1288.6	1270.2	1270.2	1267.4
25°	1263.1	1251.9	1228.0	1230.7	1228.0
27.5°	1220.8	1210.9	1192.8	1188.5	1181.6
30°	1178.6	1167.3	1146.2	1142.0	1136.3
32.5°	1133.5	1125.1	1102.5	1094.0	1088.3
35°	1089.8	1075.8	1053.2	1044.7	1037.6
37.5°	1040.4	1027.7	1005.1	995.3	988.3
40°	989.8	978.4	955.8	943.2	937.6
42.5°	940.4	929.0	906.6	892.4	884.0
45°	886.8	877.0	855.7	840.4	834.6
47.5°	834.6	824.7	802.2	786.7	778.3
50°	779.6	772.5	752.8	733.1	726.0
52.5°	726.0	716.2	697.9	682.4	672.5
55°	671.2	662.6	645.7	628.8	621.8
57.5°	616.1	609.1	590.6	573.8	568.1
60°	561.1	555.5	535.8	520.3	516.0
62.5°	507.5	497.7	483.6	469.5	463.8
65°	452.6	444.1	430.0	417.3	410.3
67.5°	396.2	389.0	376.5	366.6	361.0
70°	344.0	338.4	325.6	315.8	310.2
72.5°	290.5	284.8	277.8	267.9	263.7
75°	236.8	234.1	226.9	218.5	221.4
77.5°	188.9	183.2	180.4	176.2	172.0
80°	141.0	139.5	136.7	132.5	129.7
82.5°	95.9	95.9	94.6	88.8	88.8
85°	57.7	56.4	55.0	50.7	49.4
87.5°	25.4	22.6	19.8	15.5	14.0
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	13.07	14.68	13.43	14.99	15.31	12.62	14.23	12.99	14.55	14.86
	3H	14.82	16.27	15.19	16.60	16.96	14.33	15.78	14.70	16.11	16.47
	4H	15.46	16.83	15.86	17.18	17.56	14.97	16.34	15.37	16.68	17.06
	6H	15.93	17.20	16.34	17.56	17.96	15.43	16.70	15.84	17.06	17.45
	8H	16.07	17.29	16.50	17.67	18.07	15.57	16.78	16.00	17.17	17.57
	12H	16.16	17.32	16.59	17.71	18.14	15.65	16.81	16.08	17.19	17.62
4H	2H	13.63	15.00	14.02	15.34	15.72	13.27	14.64	13.67	14.99	15.37
	3H	15.60	16.75	16.01	17.15	17.55	15.20	16.34	15.60	16.74	17.14
	4H	16.38	17.41	16.81	17.83	18.26	15.95	16.99	16.39	17.40	17.84
	6H	16.97	17.88	17.43	18.32	18.78	16.54	17.45	17.00	17.89	18.34
	8H	17.16	18.01	17.62	18.45	18.92	16.73	17.57	17.19	18.01	18.48
	12H	17.30	18.06	17.78	18.53	19.00	16.84	17.60	17.32	18.08	18.55
8H	4H	16.65	17.50	17.11	17.94	18.41	16.28	17.12	16.74	17.57	18.03
	6H	17.37	18.07	17.86	18.56	19.03	16.98	17.69	17.48	18.18	18.65
	8H	17.62	18.26	18.13	18.76	19.25	17.23	17.86	17.74	18.37	18.86
	12H	17.82	18.38	18.33	18.87	19.43	17.41	17.97	17.92	18.46	19.02
12H	4H	16.68	17.44	17.16	17.91	18.38	16.31	17.07	16.79	17.55	18.02
	6H	17.41	18.04	17.92	18.55	19.04	17.04	17.67	17.55	18.18	18.67
	8H	17.72	18.28	18.23	18.77	19.33	17.35	17.90	17.85	18.40	18.96