

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: P931298

Luminaire Tested: DFN2DS-TR2F0-050DS950-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931298
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-TR2F0-050DS950-RLL
Description: 2 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

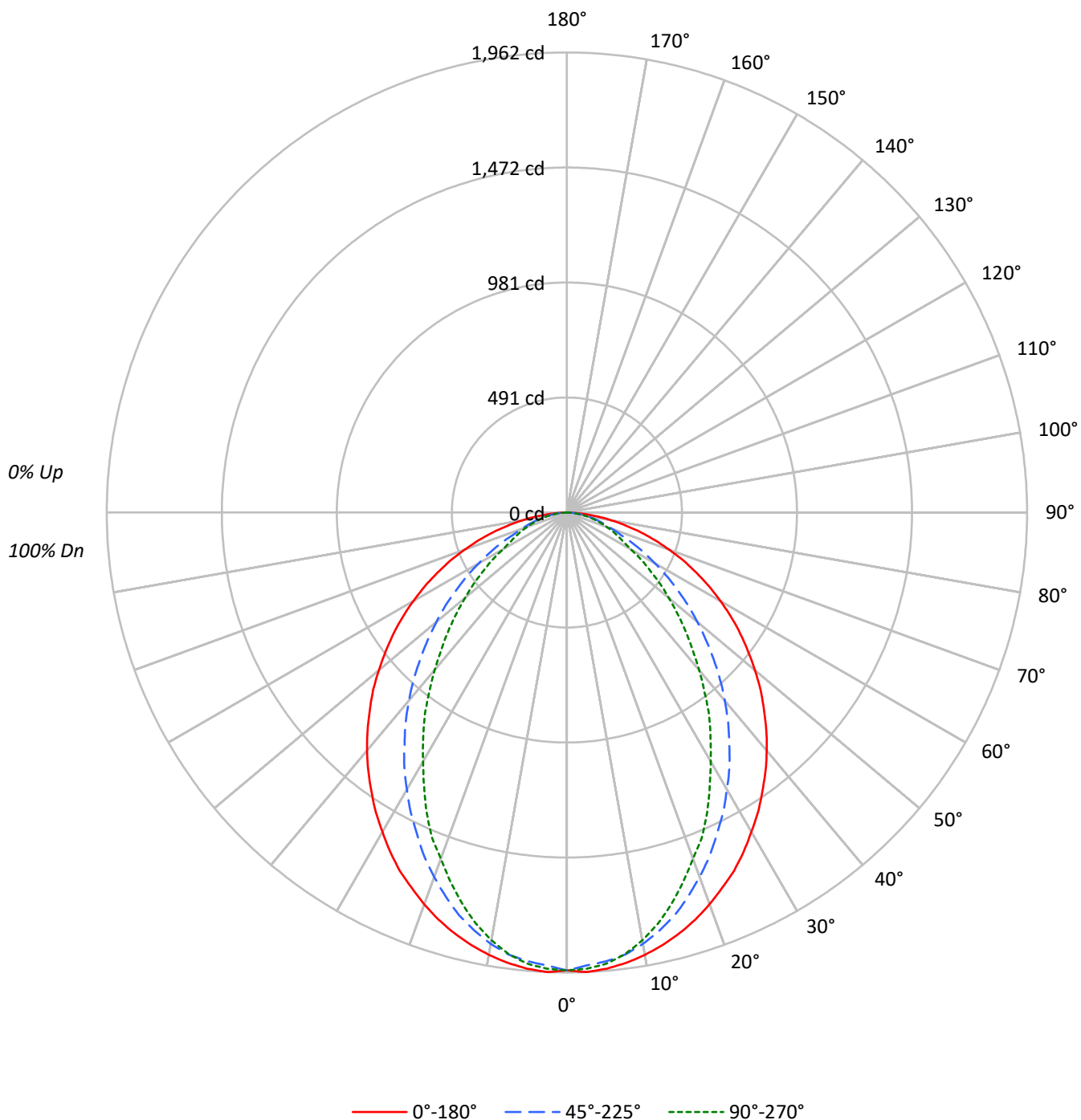
Lumens per Lamp: N/A
Luminaire Lumens: 4016.3 lumens
Efficiency: N/A
Efficacy: 80.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.36' x L: 2.04' x H: 0')
CIE Type: Direct

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°	4356	4356	4356
5°	4372	4301	4325
10°	4339	4231	4195
15°	4289	4105	3987
20°	4220	3926	3729
25°	4149	3723	3479
30°	4051	3514	3159
35°	3955	3287	2878
40°	3859	3051	2552
45°	3746	2787	2257
50°	3631	2521	1969
55°	3511	2233	1691
60°	3374	1931	1403
65°	3218	1623	1278
70°	3031	1337	1175
75°	2802	1219	1097
80°	2474	1089	999
85°	1945	857	857

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3746 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	183.0	4.6
10°-20°	502.4	12.5
20°-30°	705.4	17.6
30°-40°	768.9	19.1
40°-50°	706.7	17.6
50°-60°	555.0	13.8
60°-70°	361.3	9.0
70°-80°	186.0	4.6
80°-90°	47.5	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°	1390.9	34.6
0°-40°	2159.8	53.8
0°-60°	3421.5	85.2
0°-90°	4016.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4016.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1953	1953	1953	1953	1953	
5°	1953	1944	1921	1937	1932	185
15°	1857	1838	1778	1744	1727	523
25°	1686	1629	1513	1440	1414	775
35°	1453	1363	1207	1096	1057	909
45°	1188	1069	884	758	716	917
55°	903	765	574	468	435	807
65°	610	466	308	248	242	604
75°	325	201	141	129	127	344
85°	76	39	34	34	34	91
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1952.8	1952.8	1952.8	1952.8	1952.8
2.5°	1961.6	1952.8	1933.4	1951.1	1947.6
5°	1952.8	1944.1	1921.0	1936.9	1931.7
7.5°	1936.9	1926.4	1901.6	1908.6	1899.7
10°	1915.7	1903.3	1868.1	1862.7	1852.1
12.5°	1889.2	1873.4	1825.6	1815.1	1795.5
15°	1857.4	1837.9	1777.9	1744.4	1726.7
17.5°	1820.3	1792.0	1717.7	1678.9	1650.5
20°	1777.9	1742.5	1654.1	1610.1	1571.1
22.5°	1732.0	1691.3	1588.7	1528.7	1502.3
25°	1686.0	1629.4	1512.8	1440.4	1413.7
27.5°	1631.3	1571.1	1442.1	1359.0	1318.4
30°	1573.0	1505.7	1364.3	1274.2	1226.4
32.5°	1516.3	1435.0	1290.2	1184.1	1139.9
35°	1452.7	1362.6	1207.1	1095.7	1056.8
37.5°	1390.9	1293.6	1129.4	1007.3	963.2
40°	1325.5	1219.5	1047.9	922.5	876.6
42.5°	1258.4	1145.2	966.7	835.9	791.8
45°	1187.7	1069.2	883.7	758.1	715.6
47.5°	1120.5	995.1	804.2	678.6	639.8
50°	1046.3	920.8	726.4	604.3	567.4
52.5°	973.7	841.1	652.1	535.5	502.0
55°	903.0	765.2	574.3	468.3	434.8
57.5°	830.7	689.3	505.5	406.5	378.2
60°	756.4	615.0	432.9	342.9	314.6
62.5°	684.0	542.6	371.1	286.3	272.3
65°	609.7	466.5	307.5	247.5	242.1
67.5°	539.0	395.9	247.5	217.4	212.1
70°	464.8	327.0	205.0	187.3	180.2
72.5°	394.2	263.3	171.4	157.3	153.8
75°	325.2	201.4	141.4	129.0	127.3
77.5°	256.3	143.1	111.4	104.2	100.6
80°	192.6	102.5	84.8	77.8	77.8
82.5°	134.3	69.0	58.3	54.7	54.7
85°	76.0	38.8	33.5	33.5	33.5
87.5°	28.4	14.1	14.1	12.4	12.4
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	16.35	17.87	16.71	18.18	18.50	12.31	13.83	12.67	14.14	14.46
	3H	18.11	19.48	18.49	19.81	20.17	13.57	14.94	13.95	15.27	15.63
	4H	18.78	20.06	19.18	20.41	20.79	14.07	15.36	14.47	15.70	16.08
	6H	19.27	20.45	19.68	20.82	21.21	14.46	15.64	14.87	16.00	16.40
	8H	19.43	20.56	19.86	20.95	21.35	14.58	15.71	15.01	16.10	16.50
	12H	19.54	20.62	19.97	21.00	21.43	14.66	15.74	15.09	16.12	16.55
4H	2H	16.45	17.73	16.85	18.08	18.46	13.00	14.28	13.40	14.63	15.01
	3H	18.38	19.45	18.80	19.85	20.25	14.45	15.51	14.86	15.91	16.31
	4H	19.13	20.09	19.57	20.51	20.95	15.05	16.00	15.48	16.42	16.86
	6H	19.73	20.56	20.18	21.00	21.46	15.53	16.37	15.99	16.81	17.27
	8H	19.94	20.72	20.40	21.16	21.63	15.70	16.47	16.16	16.92	17.38
	12H	20.09	20.79	20.58	21.27	21.74	15.81	16.51	16.29	16.98	17.46
8H	4H	19.16	19.94	19.62	20.38	20.85	15.40	16.18	15.86	16.62	17.09
	6H	19.80	20.44	20.29	20.93	21.41	15.99	16.63	16.48	17.12	17.60
	8H	20.05	20.62	20.56	21.13	21.62	16.21	16.78	16.72	17.29	17.78
	12H	20.25	20.76	20.76	21.25	21.82	16.39	16.90	16.89	17.39	17.95
12H	4H	19.14	19.84	19.63	20.32	20.79	15.44	16.14	15.93	16.62	17.09
	6H	19.78	20.35	20.29	20.86	21.35	16.05	16.63	16.56	17.14	17.62
	8H	20.06	20.57	20.57	21.06	21.63	16.32	16.83	16.83	17.32	17.89