

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: P931380

Luminaire Tested: DFN2DS-TR3F0-060DS927-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931380
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-TR3F0-060DS927-RLL
Description: 3 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

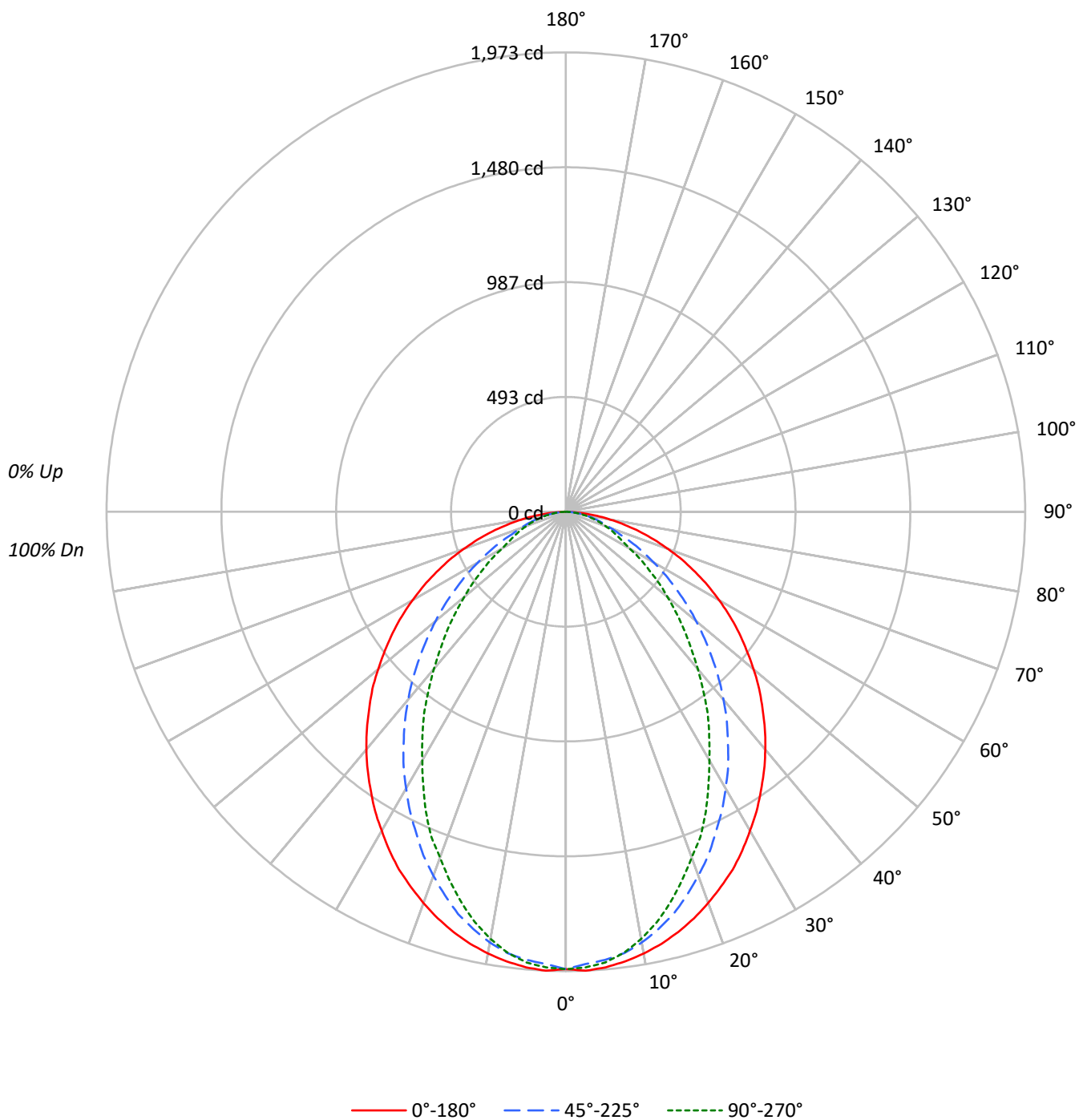
Lumens per Lamp: N/A
Luminaire Lumens: 4039.2 lumens
Efficiency: N/A
Efficacy: 65.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.16' x L: 2.74' x H: 0')
CIE Type: Direct

Input Watts (W): 61.6
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

TEST NUMBER: P931380

CATALOG NUMBER: DFN2DS-TR3F0-060DS927-RLL

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°	2447	2447	2447
5°	2457	2417	2430
10°	2438	2377	2357
15°	2410	2307	2240
20°	2371	2206	2095
25°	2331	2092	1955
30°	2276	1974	1775
35°	2223	1847	1617
40°	2168	1714	1434
45°	2105	1566	1268
50°	2040	1416	1106
55°	1973	1255	950
60°	1896	1085	789
65°	1808	912	718
70°	1703	751	660
75°	1574	685	617
80°	1389	611	561
85°	1091	482	482

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2105 cd/sqm

TEST NUMBER: P931380

CATALOG NUMBER: DFN2DS-TR3F0-060DS927-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.1	4.6
10°-20°	505.3	12.5
20°-30°	709.4	17.6
30°-40°	773.3	19.1
40°-50°	710.8	17.6
50°-60°	558.2	13.8
60°-70°	363.3	9.0
70°-80°	187.0	4.6
80°-90°	47.7	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°	1398.8	34.6
0°-40°	2172.1	53.8
0°-60°	3441.1	85.2
0°-90°	4039.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4039.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1964	1964	1964	1964	1964	
5°	1964	1955	1932	1948	1943	186
15°	1868	1848	1788	1754	1736	526
25°	1696	1639	1521	1449	1422	780
35°	1461	1370	1214	1102	1063	914
45°	1194	1075	889	762	720	922
55°	908	770	578	471	437	812
65°	613	469	309	249	244	608
75°	327	202	142	130	128	346
85°	76	39	34	34	34	92
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1964.0	1964.0	1964.0	1964.0	1964.0
2.5°	1972.9	1964.0	1944.4	1962.3	1958.7
5°	1964.0	1955.1	1931.9	1948.0	1942.7
7.5°	1948.0	1937.4	1912.5	1919.5	1910.6
10°	1926.6	1914.2	1878.8	1873.3	1862.7
12.5°	1900.1	1884.0	1835.9	1825.4	1805.8
15°	1868.0	1848.4	1788.0	1754.3	1736.5
17.5°	1830.7	1802.2	1727.5	1688.5	1660.0
20°	1788.0	1752.4	1663.6	1619.2	1580.0
22.5°	1741.8	1700.9	1597.8	1537.4	1510.8
25°	1695.7	1638.7	1521.4	1448.6	1421.9
27.5°	1640.6	1580.0	1450.3	1366.8	1325.9
30°	1581.9	1514.2	1372.1	1281.5	1233.5
32.5°	1525.0	1443.2	1297.6	1190.9	1146.3
35°	1461.1	1370.4	1214.1	1102.0	1062.8
37.5°	1398.8	1300.9	1135.8	1013.0	968.7
40°	1333.0	1226.5	1053.9	927.7	881.6
42.5°	1265.5	1151.8	972.3	840.6	796.4
45°	1194.4	1075.2	888.8	762.4	719.8
47.5°	1126.9	1000.8	808.8	682.5	643.4
50°	1052.3	926.1	730.5	607.8	570.6
52.5°	979.2	845.9	655.9	538.6	504.8
55°	908.2	769.6	577.6	471.1	437.3
57.5°	835.4	693.2	508.4	408.8	380.3
60°	760.7	618.6	435.4	344.9	316.4
62.5°	687.9	545.8	373.2	288.0	273.8
65°	613.2	469.2	309.3	248.9	243.5
67.5°	542.1	398.1	248.9	218.6	213.3
70°	467.4	328.8	206.1	188.4	181.2
72.5°	396.4	264.8	172.3	158.2	154.6
75°	327.0	202.5	142.2	129.7	128.1
77.5°	257.8	143.9	112.0	104.9	101.3
80°	193.6	103.1	85.2	78.2	78.2
82.5°	135.0	69.4	58.6	55.0	55.0
85°	76.3	39.0	33.7	33.7	33.7
87.5°	28.5	14.2	14.2	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	14.34	15.87	14.71	16.18	16.49	10.30	11.83	10.67	12.14	12.45
	3H	16.11	17.47	16.49	17.80	18.16	11.57	12.94	11.95	13.26	13.62
	4H	16.78	18.06	17.18	18.41	18.78	12.07	13.35	12.47	13.70	14.08
	6H	17.26	18.45	17.68	18.81	19.21	12.45	13.64	12.86	14.00	14.39
	8H	17.43	18.56	17.86	18.95	19.35	12.58	13.70	13.00	14.09	14.49
	12H	17.53	18.61	17.96	18.99	19.42	12.66	13.74	13.09	14.12	14.55
4H	2H	14.45	15.73	14.85	16.08	16.46	11.00	12.28	11.40	12.63	13.01
	3H	16.38	17.44	16.79	17.84	18.25	12.44	13.51	12.85	13.91	14.31
	4H	17.13	18.09	17.56	18.50	18.94	13.04	14.00	13.48	14.41	14.85
	6H	17.72	18.55	18.18	19.00	19.46	13.53	14.36	13.99	14.81	15.27
	8H	17.94	18.71	18.40	19.16	19.63	13.69	14.47	14.16	14.91	15.38
	12H	18.09	18.78	18.57	19.26	19.73	13.81	14.50	14.29	14.98	15.45
8H	4H	17.15	17.93	17.62	18.38	18.84	13.40	14.17	13.86	14.62	15.09
	6H	17.79	18.43	18.29	18.93	19.40	13.98	14.63	14.48	15.12	15.59
	8H	18.04	18.62	18.56	19.13	19.62	14.20	14.78	14.72	15.29	15.78
	12H	18.25	18.76	18.76	19.25	19.81	14.38	14.89	14.89	15.38	15.95
12H	4H	17.14	17.83	17.62	18.31	18.78	13.44	14.13	13.92	14.61	15.08
	6H	17.77	18.35	18.29	18.86	19.35	14.05	14.62	14.56	15.13	15.62
	8H	18.06	18.57	18.57	19.06	19.62	14.32	14.83	14.83	15.32	15.89