

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: P931460

Luminaire Tested: DFN2DS-TR4F0-040DS950-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931460
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-TR4F0-040DS950-RLL
Description: 4 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

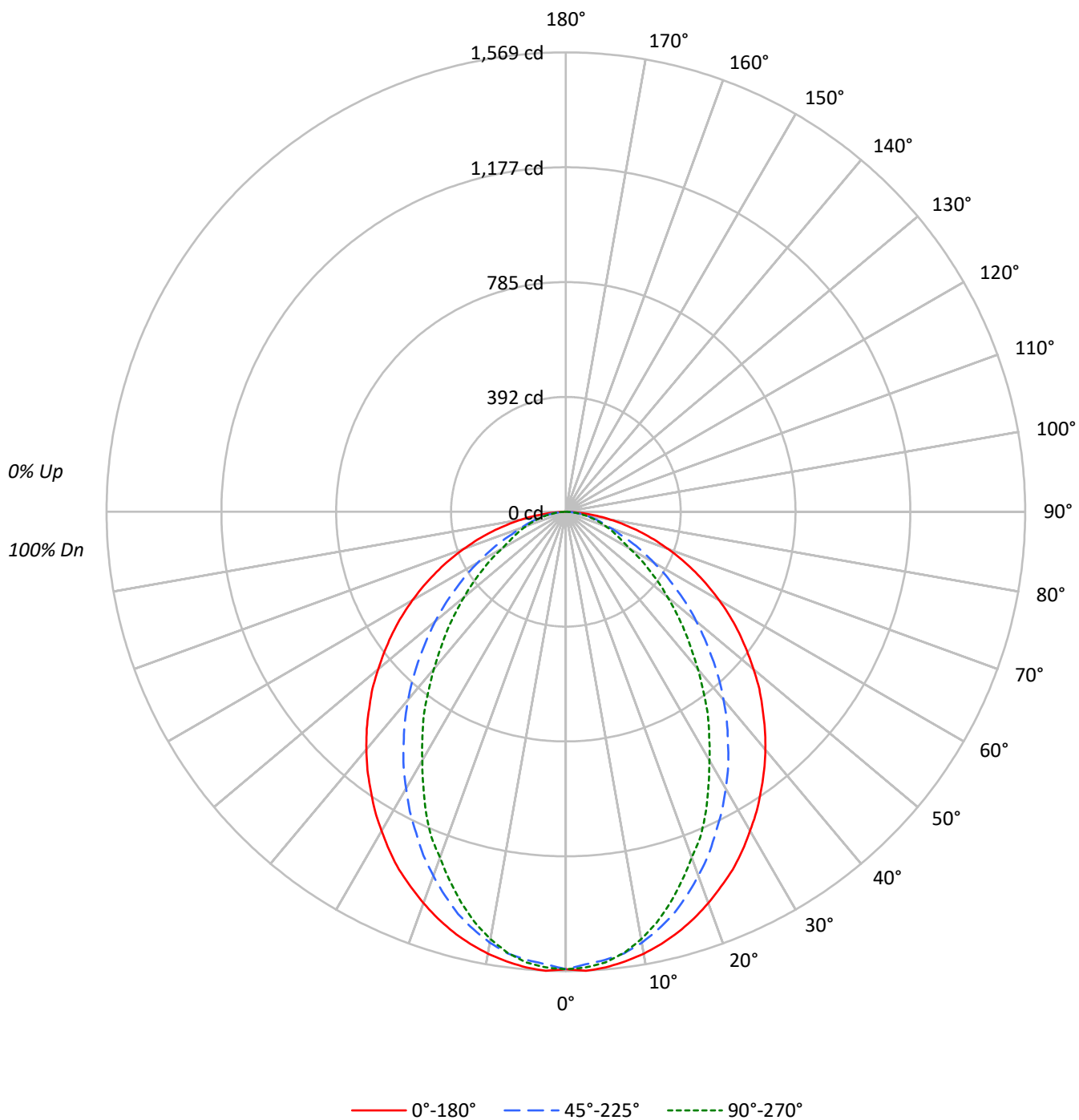
Lumens per Lamp: N/A
Luminaire Lumens: 3213.0 lumens
Efficiency: N/A
Efficacy: 84.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.96' x L: 3.43' x H: 0')
CIE Type: Direct

Input Watts (W): 38.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9952
Total Harmonic Distortion (THDi): 0.069
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P931460

CATALOG NUMBER: DFN2DS-TR4F0-040DS950-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P931460

CATALOG NUMBER: DFN2DS-TR4F0-040DS950-RLL

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°	1241	1241	1241
5°	1246	1226	1232
10°	1236	1206	1195
15°	1222	1170	1136
20°	1202	1119	1063
25°	1182	1061	991
30°	1154	1001	900
35°	1127	937	820
40°	1100	869	727
45°	1067	794	643
50°	1034	718	561
55°	1001	636	482
60°	961	550	400
65°	917	462	364
70°	864	381	335
75°	798	347	313
80°	705	310	285
85°	554	244	244

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1067 cd/sqm

TEST NUMBER: P931460

CATALOG NUMBER: DFN2DS-TR4F0-040DS950-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.4	4.6
10°-20°	401.9	12.5
20°-30°	564.3	17.6
30°-40°	615.1	19.1
40°-50°	565.4	17.6
50°-60°	444.0	13.8
60°-70°	289.0	9.0
70°-80°	148.8	4.6
80°-90°	38.0	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°	1112.7	34.6
0°-40°	1727.8	53.8
0°-60°	2737.2	85.2
0°-90°	3213.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3213.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1562	1562	1562	1562	1562	
5°	1562	1555	1537	1550	1545	148
15°	1486	1470	1422	1396	1381	419
25°	1349	1304	1210	1152	1131	620
35°	1162	1090	966	877	845	727
45°	950	855	707	606	573	734
55°	722	612	460	375	348	646
65°	488	373	246	198	194	484
75°	260	161	113	103	102	275
85°	61	31	27	27	27	73
90°	0	0	0	0	0	

TEST NUMBER: P931460

CATALOG NUMBER: DFN2DS-TR4F0-040DS950-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1562.3	1562.3	1562.3	1562.3	1562.3
2.5°	1569.4	1562.3	1546.7	1561.0	1558.0
5°	1562.3	1555.2	1536.8	1549.5	1545.4
7.5°	1549.5	1541.1	1521.4	1526.8	1519.8
10°	1532.6	1522.7	1494.4	1490.1	1481.8
12.5°	1511.4	1498.7	1460.4	1452.0	1436.4
15°	1485.9	1470.3	1422.3	1395.5	1381.4
17.5°	1456.2	1433.6	1374.1	1343.1	1320.4
20°	1422.3	1394.0	1323.3	1288.0	1256.8
22.5°	1385.6	1353.1	1270.9	1222.9	1201.9
25°	1348.8	1303.5	1210.2	1152.3	1131.0
27.5°	1305.0	1256.8	1153.7	1087.2	1054.6
30°	1258.4	1204.5	1091.4	1019.4	981.2
32.5°	1213.1	1148.0	1032.1	947.3	911.8
35°	1162.3	1090.1	965.7	876.6	845.4
37.5°	1112.7	1034.9	903.4	805.8	770.6
40°	1060.4	975.6	838.4	738.0	701.3
42.5°	1006.6	916.2	773.4	668.7	633.4
45°	950.1	855.3	707.0	606.5	572.6
47.5°	896.4	796.1	643.4	542.9	511.8
50°	837.0	736.6	581.1	483.5	453.9
52.5°	779.0	672.9	521.7	428.4	401.5
55°	722.5	612.2	459.5	374.7	347.9
57.5°	664.5	551.4	404.4	325.2	302.6
60°	605.1	492.0	346.3	274.3	251.7
62.5°	547.2	434.1	296.8	229.1	217.8
65°	487.8	373.2	246.0	198.0	193.6
67.5°	431.3	316.7	198.0	173.9	169.6
70°	371.9	261.6	164.0	149.9	144.1
72.5°	315.3	210.6	137.1	125.9	123.0
75°	260.1	161.1	113.1	103.2	101.9
77.5°	205.1	114.4	89.1	83.4	80.5
80°	154.0	82.0	67.8	62.3	62.3
82.5°	107.4	55.2	46.7	43.8	43.8
85°	60.8	31.1	26.8	26.8	26.8
87.5°	22.7	11.2	11.2	9.9	9.9
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P931460

CATALOG NUMBER: DFN2DS-TR4F0-040DS950-RLL

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	11.99	13.51	12.35	13.82	14.13	7.95	9.47	8.31	9.78	10.10
	3H	13.75	15.12	14.13	15.44	15.81	9.21	10.58	9.59	10.90	11.27
	4H	14.42	15.70	14.82	16.05	16.42	9.71	10.99	10.11	11.34	11.72
	6H	14.91	16.09	15.32	16.46	16.85	10.09	11.28	10.51	11.64	12.04
	8H	15.07	16.20	15.50	16.59	16.99	10.22	11.35	10.64	11.73	12.14
	12H	15.17	16.25	15.60	16.63	17.06	10.30	11.38	10.73	11.76	12.19
4H	2H	12.09	13.37	12.49	13.72	14.10	8.64	9.92	9.04	10.27	10.65
	3H	14.02	15.09	14.43	15.49	15.89	10.08	11.15	10.50	11.55	11.95
	4H	14.77	15.73	15.20	16.14	16.58	10.68	11.64	11.12	12.06	12.49
	6H	15.36	16.20	15.82	16.64	17.10	11.17	12.00	11.63	12.45	12.91
	8H	15.58	16.36	16.04	16.80	17.27	11.33	12.11	11.80	12.56	13.02
	12H	15.73	16.43	16.21	16.90	17.38	11.45	12.15	11.93	12.62	13.10
8H	4H	14.80	15.57	15.26	16.02	16.48	11.04	11.82	11.50	12.26	12.73
	6H	15.43	16.08	15.93	16.57	17.04	11.62	12.27	12.12	12.76	13.24
	8H	15.68	16.26	16.20	16.77	17.26	11.85	12.42	12.36	12.93	13.42
	12H	15.89	16.40	16.40	16.89	17.45	12.02	12.53	12.53	13.03	13.59
12H	4H	14.78	15.48	15.26	15.95	16.42	11.08	11.78	11.56	12.25	12.73
	6H	15.41	15.99	15.93	16.50	16.99	11.69	12.27	12.20	12.78	13.26
	8H	15.70	16.21	16.21	16.70	17.27	11.96	12.47	12.47	12.96	13.53

END OF REPORT

FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE

7 of 7