

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: P931240

Luminaire Tested: DFN2DS-TR2F0-020DS935-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931240
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-TR2F0-020DS935-RLL
Description: 2 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

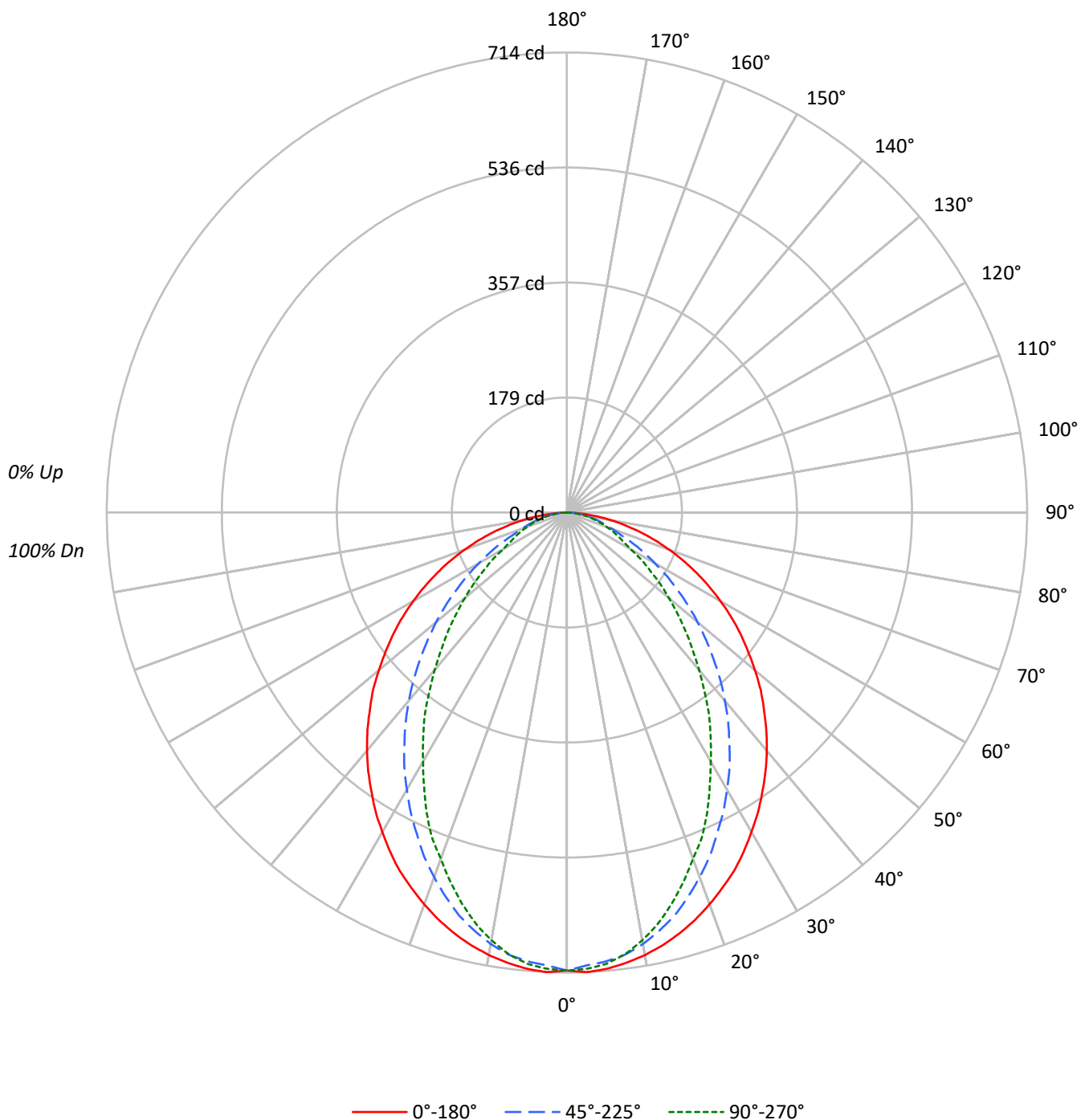
Lumens per Lamp: N/A
Luminaire Lumens: 1462.0 lumens
Efficiency: N/A
Efficacy: 83.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.36' x L: 2.04' x H: 0')
CIE Type: Direct

Input Watts (W): 17.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9968
Total Harmonic Distortion (THDi): 0.064
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P931240

CATALOG NUMBER: DFN2DS-TR2F0-020DS935-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	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	88	86	86
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76	76	74	74
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66	66	64	64
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	57	55	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	51	49	49
6	74	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	45	43	43
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	41	39	39
8	64	51	43	38	62	51	43	37	49	42	37	48	42	37	47	41	37	37	35	35
9	60	47	39	34	59	47	39	34	46	39	34	44	38	34	44	38	34	34	32	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	31	29	29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1586	1586	1586
5°	1592	1566	1574
10°	1579	1540	1527
15°	1561	1494	1452
20°	1536	1429	1357
25°	1511	1355	1266
30°	1475	1279	1150
35°	1440	1197	1047
40°	1405	1111	929
45°	1364	1015	822
50°	1322	917	717
55°	1278	813	615
60°	1229	703	511
65°	1172	591	465
70°	1103	486	428
75°	1019	443	400
80°	900	397	364
85°	706	312	312

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1364 cd/sqm

TEST NUMBER: P931240

CATALOG NUMBER: DFN2DS-TR2F0-020DS935-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.6	4.6
10°-20°	182.9	12.5
20°-30°	256.8	17.6
30°-40°	279.9	19.1
40°-50°	257.3	17.6
50°-60°	202.1	13.8
60°-70°	131.5	9.0
70°-80°	67.7	4.6
80°-90°	17.3	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°	506.3	34.6
0°-40°	786.2	53.8
0°-60°	1245.5	85.2
0°-90°	1462.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1462.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	711	711	711	711	711	
5°	711	708	699	705	703	67
15°	676	669	647	635	629	191
25°	614	593	551	524	515	282
35°	529	496	440	399	385	331
45°	432	389	322	276	260	334
55°	329	279	209	170	158	294
65°	222	170	112	90	88	220
75°	118	73	51	47	46	125
85°	28	14	12	12	12	33
90°	0	0	0	0	0	

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CATALOG NUMBER: DFN2DS-TR2F0-020DS935-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	710.9	710.9	710.9	710.9	710.9
2.5°	714.1	710.9	703.7	710.3	709.0
5°	710.9	707.7	699.3	705.1	703.1
7.5°	705.1	701.2	692.2	694.8	691.5
10°	697.4	692.8	680.0	678.0	674.2
12.5°	687.7	681.9	664.5	660.7	653.6
15°	676.1	669.0	647.2	634.9	628.6
17.5°	662.6	652.3	625.3	611.1	600.9
20°	647.2	634.2	602.2	586.1	571.9
22.5°	630.5	615.7	578.4	556.5	546.9
25°	613.8	593.1	550.7	524.3	514.6
27.5°	593.8	571.9	524.9	494.7	479.9
30°	572.6	548.1	496.6	463.9	446.4
32.5°	551.9	522.4	469.6	431.0	415.0
35°	528.8	496.0	439.5	398.9	384.7
37.5°	506.3	470.8	411.1	366.7	350.6
40°	482.5	443.9	381.5	335.8	319.1
42.5°	458.0	416.9	351.9	304.3	288.3
45°	432.3	389.2	321.7	276.0	260.5
47.5°	407.9	362.2	292.7	247.0	232.9
50°	380.9	335.2	264.4	220.0	206.6
52.5°	354.4	306.2	237.4	195.0	182.8
55°	328.7	278.6	209.1	170.5	158.2
57.5°	302.4	250.9	184.0	148.0	137.7
60°	275.4	223.9	157.6	124.9	114.6
62.5°	249.0	197.5	135.1	104.2	99.1
65°	222.0	169.8	112.0	90.1	88.2
67.5°	196.3	144.0	90.1	79.1	77.2
70°	169.2	119.0	74.6	68.2	65.6
72.5°	143.4	95.8	62.4	57.3	56.0
75°	118.3	73.3	51.4	47.0	46.4
77.5°	93.3	52.1	40.5	37.9	36.6
80°	70.1	37.3	30.9	28.3	28.3
82.5°	48.8	25.1	21.2	20.0	20.0
85°	27.6	14.1	12.2	12.2	12.2
87.5°	10.3	5.2	5.2	4.5	4.5
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	12.84	14.36	13.20	14.67	14.99	8.80	10.32	9.16	10.63	10.95
	3H	14.60	15.97	14.98	16.29	16.66	10.06	11.43	10.44	11.76	12.12
	4H	15.27	16.55	15.67	16.90	17.27	10.57	11.85	10.97	12.19	12.57
	6H	15.76	16.94	16.17	17.31	17.70	10.94	12.13	11.36	12.49	12.89
	8H	15.92	17.05	16.35	17.44	17.84	11.07	12.20	11.50	12.59	12.99
	12H	16.02	17.10	16.45	17.48	17.91	11.15	12.23	11.58	12.61	13.04
4H	2H	12.94	14.22	13.34	14.57	14.95	9.49	10.77	9.89	11.12	11.50
	3H	14.87	15.94	15.28	16.34	16.74	10.94	12.00	11.35	12.40	12.80
	4H	15.62	16.58	16.05	16.99	17.43	11.54	12.49	11.97	12.91	13.35
	6H	16.21	17.05	16.67	17.49	17.95	12.02	12.86	12.48	13.30	13.76
	8H	16.43	17.21	16.89	17.65	18.12	12.19	12.96	12.65	13.41	13.88
	12H	16.58	17.28	17.06	17.75	18.23	12.30	13.00	12.79	13.48	13.95
8H	4H	15.65	16.42	16.11	16.87	17.34	11.89	12.67	12.35	13.11	13.58
	6H	16.28	16.93	16.78	17.42	17.89	12.48	13.12	12.97	13.61	14.09
	8H	16.53	17.11	17.05	17.62	18.11	12.70	13.27	13.21	13.78	14.27
	12H	16.74	17.25	17.25	17.74	18.30	12.88	13.39	13.39	13.88	14.44
12H	4H	15.63	16.33	16.11	16.80	17.27	11.93	12.63	12.42	13.11	13.58
	6H	16.26	16.84	16.78	17.35	17.84	12.54	13.12	13.05	13.63	14.11
	8H	16.55	17.06	17.06	17.55	18.12	12.81	13.32	13.32	13.81	14.38