

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: P931237

Luminaire Tested: DFN2DS-TR2F0-020DS930-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931237
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-TR2F0-020DS930-FLL
Description: 2 foot, Triangle Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

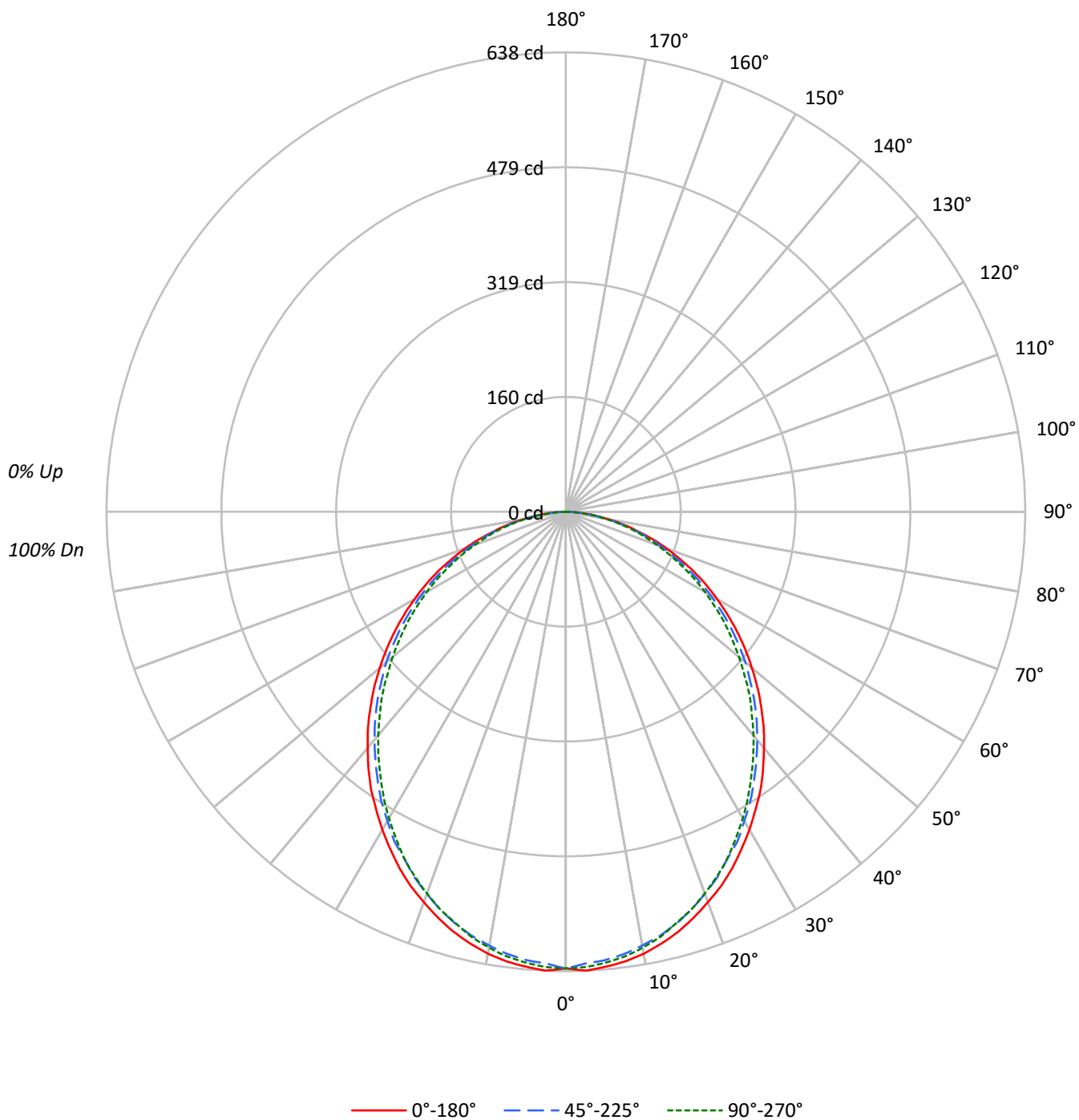
Lumens per Lamp: N/A
Luminaire Lumens: 1613.7 lumens
Efficiency: N/A
Efficacy: 91.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.36' x L: 2.04' x H: 0')
CIE Type: Direct

Input Watts (W): 17.6
Input Voltage (V): 120
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

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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°	1415	1415	1415
5°	1420	1400	1408
10°	1412	1385	1392
15°	1394	1367	1366
20°	1369	1340	1339
25°	1345	1307	1307
30°	1313	1277	1266
35°	1284	1241	1222
40°	1246	1204	1181
45°	1210	1168	1139
50°	1170	1130	1090
55°	1129	1086	1046
60°	1083	1034	996
65°	1033	982	937
70°	970	918	875
75°	882	845	826
80°	784	760	721
85°	637	609	548

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1210 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.7	3.7
10°-20°	168.0	10.4
20°-30°	246.8	15.3
30°-40°	286.7	17.8
40°-50°	286.3	17.7
50°-60°	249.7	15.5
60°-70°	184.6	11.4
70°-80°	104.4	6.5
80°-90°	27.6	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°	474.5	29.4
0°-40°	761.2	47.2
0°-60°	1297.2	80.4
0°-90°	1613.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1613.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	634	634	634	634	634	
5°	634	632	625	630	629	60
15°	604	600	592	595	592	170
25°	546	542	531	532	531	251
35°	472	465	456	452	449	294
45°	384	379	370	364	361	296
55°	290	287	279	272	269	260
65°	196	192	186	180	178	194
75°	102	101	98	94	96	109
85°	25	24	24	22	21	29
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	634.2	634.2	634.2	634.2	634.2
2.5°	637.9	634.9	628.1	634.2	633.1
5°	634.2	631.9	625.1	630.0	628.8
7.5°	630.0	626.3	619.6	624.5	623.3
10°	623.3	619.1	611.7	616.5	614.8
12.5°	614.1	610.5	603.2	606.2	605.0
15°	603.8	600.2	592.2	594.6	591.6
17.5°	591.0	587.4	579.4	582.4	579.4
20°	576.9	573.3	564.7	566.6	564.1
22.5°	562.9	557.5	549.5	549.5	548.3
25°	546.5	541.6	531.2	532.4	531.2
27.5°	528.1	523.9	516.0	514.2	511.1
30°	509.9	505.0	495.8	494.1	491.5
32.5°	490.3	486.7	476.9	473.3	470.8
35°	471.5	465.4	455.6	451.9	448.8
37.5°	450.1	444.6	434.8	430.6	427.5
40°	428.1	423.2	413.4	408.1	405.5
42.5°	406.8	401.9	392.2	386.1	382.4
45°	383.6	379.4	370.2	363.5	361.0
47.5°	361.0	356.8	347.0	340.3	336.7
50°	337.2	334.2	325.7	317.1	314.1
52.5°	314.1	309.8	301.9	295.2	291.0
55°	290.3	286.6	279.3	272.0	269.0
57.5°	266.5	263.5	255.5	248.2	245.7
60°	242.7	240.3	231.8	225.0	223.2
62.5°	219.6	215.2	209.2	203.1	200.7
65°	195.8	192.1	186.1	180.5	177.5
67.5°	171.4	168.3	162.8	158.6	156.2
70°	148.8	146.4	140.8	136.6	134.2
72.5°	125.7	123.2	120.1	115.9	114.1
75°	102.4	101.3	98.1	94.5	95.8
77.5°	81.7	79.3	78.0	76.2	74.4
80°	61.0	60.4	59.2	57.3	56.1
82.5°	41.5	41.5	40.9	38.5	38.5
85°	24.9	24.4	23.8	21.9	21.4
87.5°	11.0	9.8	8.6	6.8	6.1
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	12.49	14.10	12.85	14.41	14.73	12.04	13.65	12.41	13.97	14.28
	3H	14.24	15.69	14.61	16.02	16.38	13.75	15.20	14.12	15.53	15.89
	4H	14.88	16.25	15.28	16.60	16.98	14.39	15.76	14.79	16.11	16.48
	6H	15.35	16.62	15.76	16.99	17.38	14.85	16.12	15.26	16.49	16.88
	8H	15.50	16.71	15.92	17.10	17.50	14.99	16.20	15.42	16.59	16.99
	12H	15.59	16.75	16.02	17.13	17.56	15.08	16.24	15.50	16.62	17.05
4H	2H	13.05	14.42	13.45	14.77	15.14	12.70	14.06	13.09	14.41	14.79
	3H	15.02	16.17	15.43	16.57	16.97	14.62	15.76	15.03	16.16	16.56
	4H	15.80	16.84	16.23	17.25	17.69	15.38	16.41	15.81	16.83	17.26
	6H	16.40	17.30	16.85	17.74	18.20	15.96	16.87	16.42	17.31	17.77
	8H	16.59	17.43	17.05	17.88	18.34	16.15	16.99	16.61	17.44	17.90
	12H	16.72	17.48	17.20	17.95	18.42	16.27	17.03	16.75	17.50	17.97
8H	4H	16.07	16.92	16.53	17.36	17.83	15.70	16.55	16.16	16.99	17.45
	6H	16.79	17.49	17.28	17.98	18.45	16.41	17.11	16.90	17.60	18.07
	8H	17.05	17.68	17.56	18.18	18.67	16.66	17.29	17.17	17.79	18.28
	12H	17.25	17.80	17.75	18.30	18.86	16.83	17.39	17.34	17.88	18.44
12H	4H	16.10	16.86	16.58	17.34	17.80	15.73	16.49	16.21	16.97	17.44
	6H	16.83	17.47	17.34	17.97	18.46	16.46	17.10	16.97	17.60	18.09
	8H	17.15	17.71	17.65	18.20	18.76	16.77	17.33	17.28	17.82	18.38